

**MGC RESOURCES, INC.
SPRING VALLEY EXPLORATION PROJECT
PERSHING COUNTY, NEVADA**

**Preliminary
Environmental Assessment
Number NV-020-07-EA-02**

March 2007

Bureau of Land Management
Winnemucca Field Office
5100 East Winnemucca Blvd.
Winnemucca, Nevada 89445

MGC RESOURCES, INC.
SPRING VALLEY EXPLORATION PROJECT
PRELIMINARY
ENVIRONMENTAL ASSESSMENT

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1. INTRODUCTION / PURPOSE OF AND NEED FOR ACTION

1.1. Introduction

The Spring Valley Exploration Project (Project) is located in Spring Valley at elevations ranging between 5,400 feet above mean sea level (amsl) to 6,400 feet amsl in Pershing County, Nevada, approximately 20 miles northeast of Lovelock (Figure 1). The Project is located on approximately 1,040 acres of public land administered by the Bureau of Land Management's Winnemucca Field Office (BLM) and approximately 160 acres of private land in Sections 34 and 35, Township 29 North, Range 34 East (T29N, R34E), and Sections 2 and 4, T28N, R34E, Mount Diablo Base & Meridian (MDB&M) (Project Area) (Figure 2). The Project also includes approximately 0.02 acre of private land in Section 3, T28N, R34E, which would only be used to store supplies, in the open or in cargo containers, and equipment (Figure 2). The total proposed disturbance on public and private lands for the Project Area consists of 75 acres.

MGC Resources, Inc. (MGC) proposes to expand Notice-level (NVN-078048) mineral exploration activities on public and private land, which included construction of drill sites, roads, overland travel, and drilling (Proposed Action). The combined acres of disturbance on BLM-administered land and private land is greater than five acres; therefore, a Plan of Operations/Revised Permit for Reclamation (Plan) (Record Number NVN-081071/Reclamation Permit No. 258) has been submitted to the Nevada Division of Environmental Protection (NDEP) Bureau of Regulation and Reclamation (BMRR) and the BLM.

Table 1 outlines the total acreage of existing and proposed surface disturbance, by type of disturbance, for the Project. There is a total of 6.63 acres of disturbance on private land. The 4.85 acres of existing Notice-level disturbance is on land administered by the BLM and the 6.63 acres on private land is included in the proposed total disturbance of 75 acres. The Proposed Action would be implemented in a phased manner. Exploration would occur in phases that would be outlined by work plans and maps for activities that could occur anywhere within the Project Area. These work plans would be submitted to the BLM and BMRR for processing prior to commencement of activities. The maps would show the location of the planned surface disturbance to ensure that all eligible and unevaluated cultural resources are avoided. The first phase and the subsequent phases of exploration are outlined in Table 1.

Phase I of the Plan would create 12.43 acres of surface disturbance within the Project Area shown in Figure 2. The remaining 51.09 acres would be implemented in subsequent phases over the next ten years. Phase I disturbance has been submitted to the BLM; however, due to the confidential nature of the information, the drill sites and roads are not shown on Figure 2.

In addition to the work plans, on a yearly basis, on or before April 15th, MGC would also submit to the BLM and BMRR summary of exploration activities for the previous year, and a reclamation cost estimate for existing surface disturbance to ensure consistency with the current bond amount. MGC plans to bond for the additional 51.09 acres in subsequent phases based on activities and drilling results.

Figure 1: General Location Map

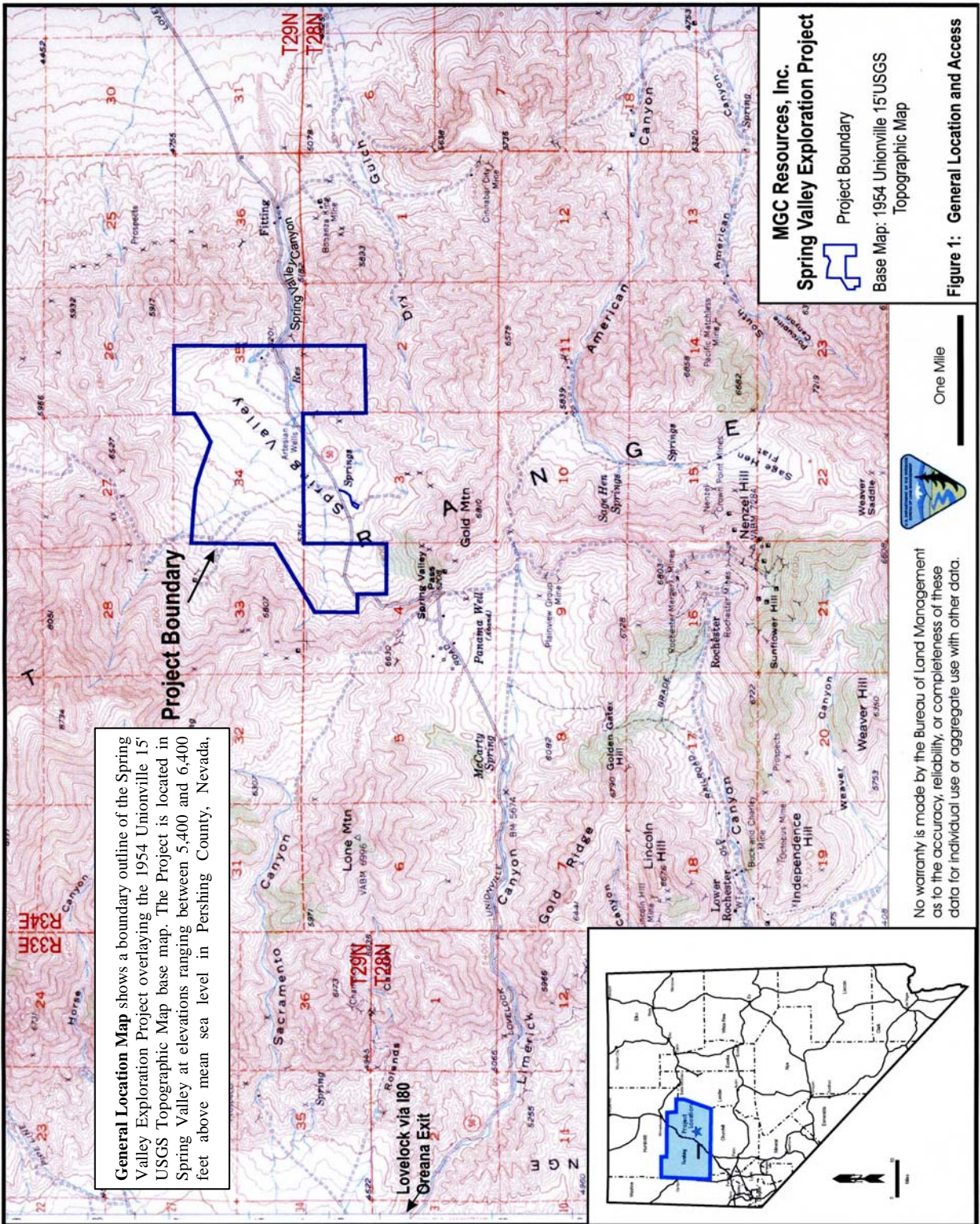


Figure 2: Project Area Showing Land Ownership and Existing Disturbance

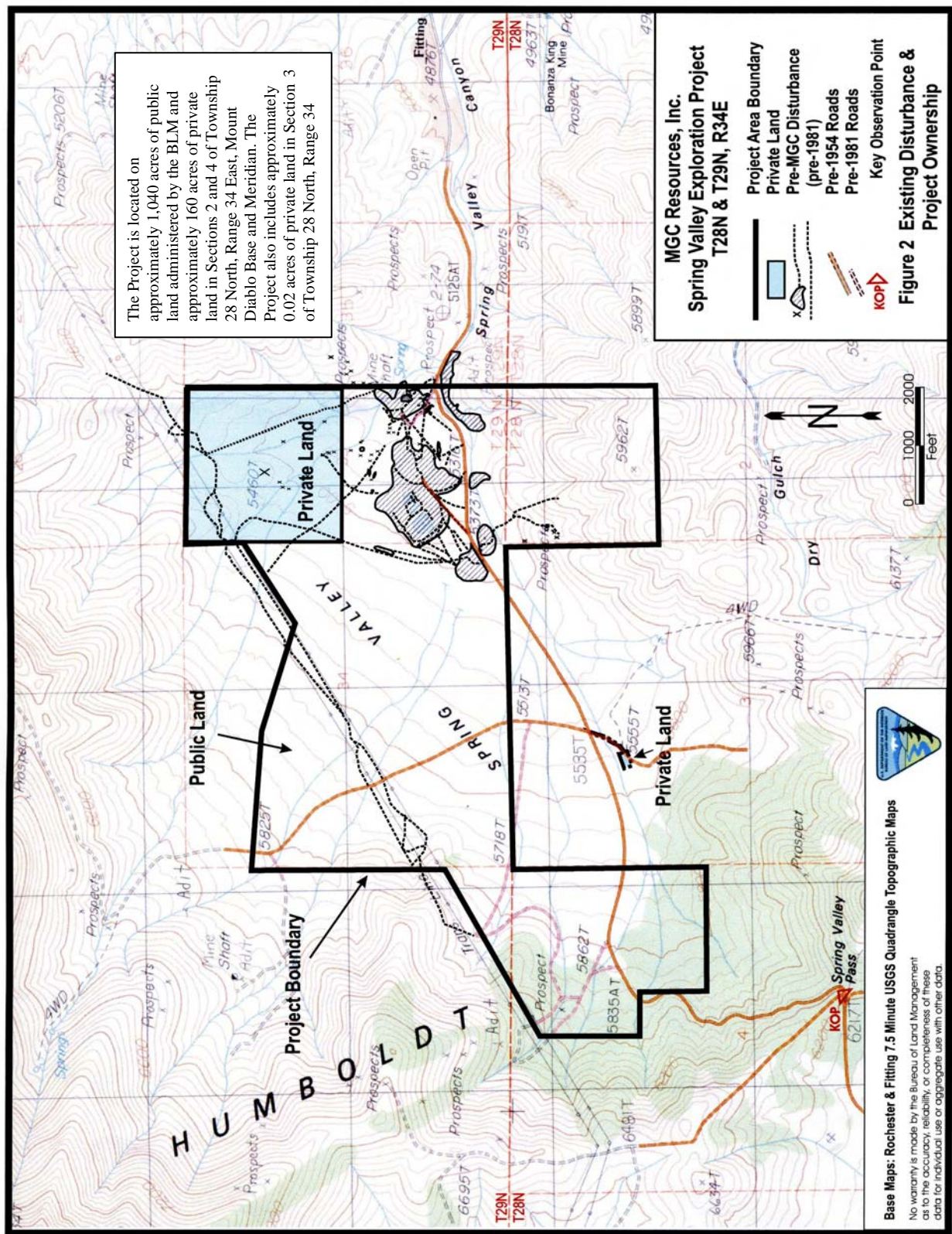


Table 1: Acreage of Existing and Proposed Project Disturbance

Exploration Activity	Land Status	Surface Disturbance (acres)			
		Existing Disturbance	Proposed Phase I	Proposed Subsequent Phases	Total Disturbance
Constructed Roads	Public	0.97	2.17	3.27	6.41
	Private	0.14	0.17	3.04	3.35
Overland Travel	Public	0.95	3.38	14.60	18.93
	Private	3.18	2.57	10.43	16.18
Constructed Drill Sites (includes sumps and spoils)	Public	1.31	0.22	2.90	4.43
	Private	0.82	0.11	1.85	2.78
Overland Drill Sites (includes sumps and spoils)	Public	1.62	1.64	10.50	13.76
	Private	2.47	2.17	4.16	8.80
Trenching and Bulk Sampling	Public	0.00	0.00	0.34	0.34
	Private	0.00	0.00	0.00	0.00
Fenced Supply Area	Private	0.02	0.00	0.00	0.02
Total		11.48	12.43	51.09	75.00
Private		6.63	5.02	19.48	31.13
Public		4.85	7.41	31.61	43.87

1.2. Purpose of and Need for Action

The purpose of the Proposed Action is to locate and delineate precious mineral deposits within the Project Area. The proposed activities are needed in order to evaluate the Project Area for the potential of future mine development. In order to conduct the proposed exploration activities on public lands, MGC submitted the Plan to the BLM in accordance with BLM Surface Management Regulations, 43 Code of Federal Regulations (CFR) 3809 (as amended). The BLM is required to comply with the National Environmental Policy Act (NEPA) to analyze the impacts the Proposed Action and possible alternatives would have on the human environment. This Environmental Assessment (EA) is prepared in conformance with the NEPA, associated Council of Environmental Quality (CEQ) regulations (40 CFR 1500-1508), and BLM NEPA Handbook H-1790-1 (BLM 1988).

1.3. Issues

BLM personnel identified the following issues and concerns regarding the Proposed Action that need to be addressed in this EA:

- Cultural Resources;
- Invasive, Nonnative Species;
- Rangeland Management;
- Wastes, Hazardous and Solid;
- Water Resources; and
- Wetlands.

A news release was sent out by the BLM on February 15, 2006, requesting comments on the Plan. Three comments were received. One commentor expressed support for the Project, one

commentor had a question but did not request an EA, and a third commentor felt the Plan had subjective statements and loose language. No specific issues were put forward for analysis in this EA.

1.4. Land Use Conformance Statement

The Proposed Action and the No Action Alternative described in this EA are in conformance with the Sonoma-Gerlach Management Framework Plan (MFP) III (BLM 1982), which states that the BLM should “Make no land-use decisions that would interfere with the potential development of economically important minerals occurring on public lands or other federally owned minerals within mining districts or other areas outside of designated mining districts.” The EA is also consistent with federal, state and local laws, regulations, and plans.

2. PROPOSED ACTION AND ALTERNATIVES

2.1. Proposed Action

The Proposed Action is to expand the number of permitted acres from MGC's existing Notice-level and private land activities. A total disturbance of 75 acres (Table 1) within the expanded Project Area would include existing Notice-level surface disturbance (4.85 acres), private land disturbance (6.63 acres), and proposed phased surface disturbance of approximately 51.09 acres. The Proposed Action would include constructed and nonconstructed drill sites (a.k.a. overland drill sites), constructed exploration roads, and overland travel. Approximately 77 percent of total disturbance associated with the Project has or would result from overland travel. All activities included in the proposed 51.09 acres of surface disturbance would be implemented in a phased manner based on geologic mapping and drill results. The allocation of acreage by activity outlined in Table 1 and the following sections is representative of the Proposed Action; however, the acreage could be redistributed within the limit of the total 75 acres to accomplish the Proposed Action. Exploration would occur in phases that would be outlined by work plans and maps for activities that could occur anywhere within the Project Area. These work plans would be submitted to the BLM and BMRR for processing prior to commencement of activities. The maps would show the location of the planned surface disturbance including cross country travel routes to ensure that all eligible and unevaluated cultural resources are avoided. The first phase and the subsequent phases of exploration are outlined in Table 1. The following discussion outlines the activities that would transpire during the phases of the Proposed Action.

2.1.1. Location and Access

Existing county maintained roads would be utilized to access the Project Area. Access to the Project Area is via Interstate 80 to the turnoff at Oreana onto Limerick Canyon Road and then Spring Valley Road. The Project Area could also be accessed from Mill City via the Lovelock Unionville Road (SR 400) to Spring Valley Road. All Project-related traffic would observe prudent speed limits to enhance public safety, protect wildlife and livestock, and minimize dust emissions.

The majority of drill sites would be accessed using approximately 18,500 feet (Phase I) of overland travel. Approximately 5.95 acres of overland travel are proposed in Phase I and 25 acres in subsequent phases. There are 4.13 acres of existing disturbance from overland travel, which revegetated naturally and after one year. The overland drill sites were not obvious after one growing season and could only be located by finding the sumps that had not yet been recontoured.

2.1.2. Exploration Drill Pads

The majority of drill sites are considered overland sites and would not require any blading; however, for purposes of reseeding and ripping, if needed, a pad disturbance of approximately 30 feet by 70 feet has been used for a total of 54 sites under Phase I. A total of nine constructed drill sites is proposed under Phase I. Constructed drill sites would each measure approximately 40 feet by 40 feet, and drill site construction within drainages would be avoided. Sumps, measuring approximately 30 feet by 30 feet by three feet deep, would be constructed at all drill sites to contain drill cuttings. A total of 79 sumps is anticipated for Phase I; however, a sump could be used by more than one drill site. Spoil piles associated with each sump would be located on the drill site and would not create excess surface disturbance.

Up to five trenches could be constructed to conduct near surface mapping and sampling. Trenches would be 30 feet wide by 15 feet deep and approximately 100 feet long, including the spoil piles. This equals approximately 0.34 acre of surface disturbance. No trenches are proposed under the Project's Phase I.

Constructed drill sites and sumps under Phase I would disturb 0.33 acre, and overland drill sites and sumps would disturb 3.81 acres in addition to the 2.13 acres constructed and 4.09 overland acres disturbed under Notice-level and private land activities. These activities would total 10.36 acres leaving 19.41 acres for subsequent phases. The total proposed disturbance combined with existing drill pad and sump disturbance would be approximately 29.77 acres (Table 1).

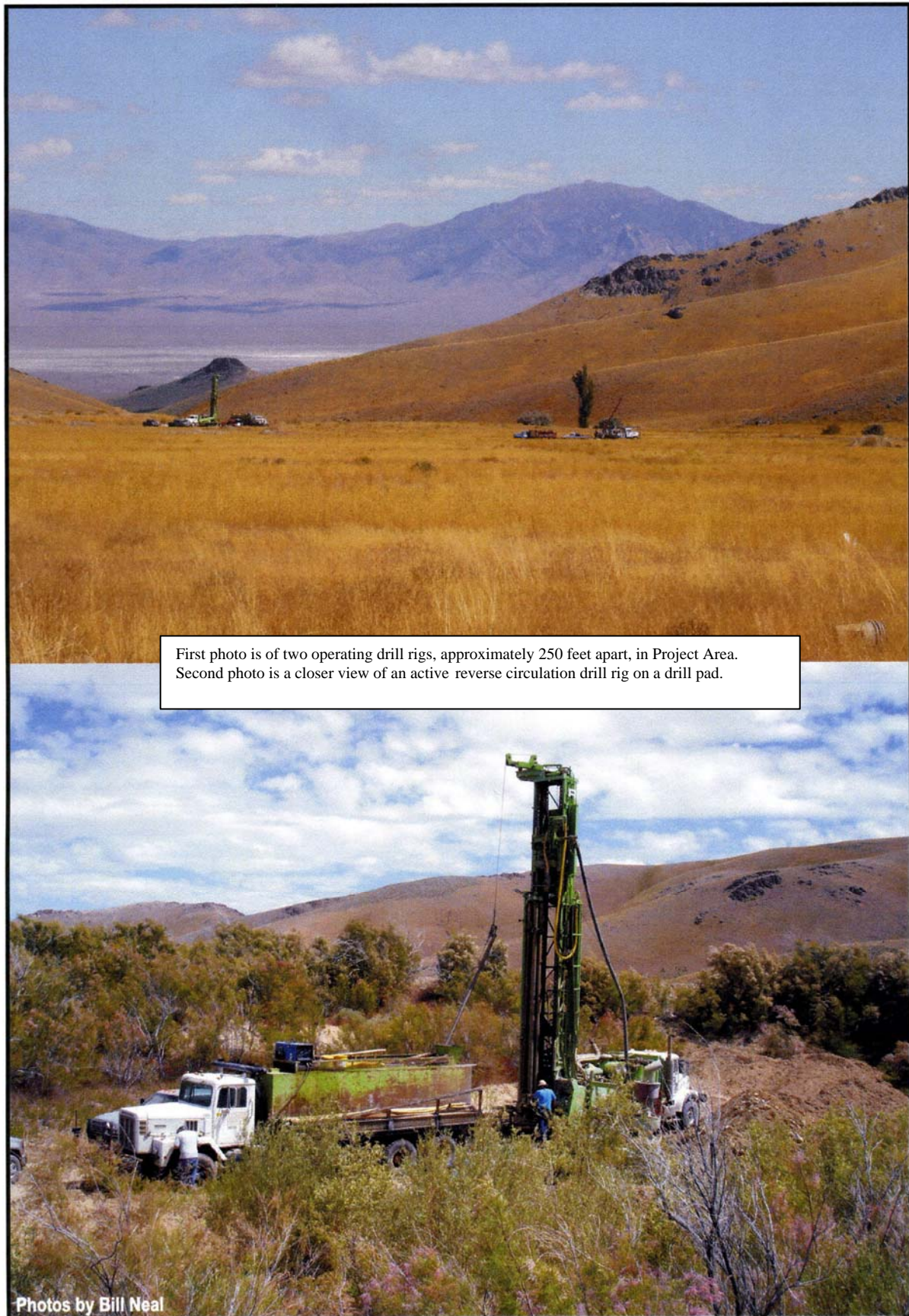
MGC would conduct exploration drilling with up to eight drill rigs over the life of the Project. Only three drill rigs are anticipated for Phase I exploration. Drill holes would be vertical or angled and drilled with reverse circulation and/or core drill rigs. Figure 3 shows two photographs of typical drill rigs and their setup at the Project Area. Total depth of drill holes would average approximately 500 feet. Up to five drill holes would be collared with a reverse circulation drill rig to an average depth of 125 feet and completed using a core rig. Drill holes temporarily left open would be capped with a pitless style aluminum (or other available material) well seal (cap) that fits over the outside of the hole casing. Once the core rig has completed drilling the hole, the hole would be plugged.

All but five drill holes would be plugged prior to the drill rig moving from the drill site in accordance with Nevada Revised Statutes (NRS) 534, Nevada Administrative Code (NAC) 534.4369, and NAC 534.4371. Five drill holes would be collared with a reverse circulation drill rig and completed with a core rig. If any drill hole produces artesian flow, the drill hole would be contained pursuant to NRS 534.060 and NAC 534.378 and would be sealed by the method described in Subsection 2 of NAC 534.4371. If the casings are set in a drill hole, either the drill hole must be completed as a well and plugged pursuant to NAC 534.420 or the casings would be completely removed from the drill hole and then be plugged according to NAC 534.4369 and NAC 534.4371. Four of the five open holes would be bonded for a depth of 125 feet while the fifth hole would be bonded for a total depth of 500 feet.

2.1.3. Road Construction

The majority of access-related disturbance would be from overland travel. MGC would construct approximately 6,808 feet of exploration road with a disturbance width of 15 feet under Phase I. The constructed exploration roads would result in approximately 2.34 acres of surface disturbance under Phase I in addition to 1.11 acres from Notice-level and private land activities (for a total of 3.45 acres). Subsequent phases could disturb an additional 6.31 acres. All of the surface disturbance would occur on public and private land for a total disturbance of 9.76 acres from constructed roads (Table 1).

Figure 3: Typical Drill Rigs and Setup at the Project Area



Exploration roads and drill pads, which require earth moving, would be located and constructed using standard construction practices for temporary mineral exploration roads to minimize surface disturbance, erosion and visual contrast, as well as to facilitate reclamation. Road construction would be implemented using a Cat D8L or equivalent. The proposed exploration roads and spurs would be bladed to an average width of 15 feet including side cast material, with waterbars installed as needed or as required by BLM Roads manual 9113. Every effort would be made to keep road grades at ten percent or less and would not exceed 16 percent. No ridge top roads would be constructed. Balanced cut and fill construction would be used to the extent possible to minimize the exposed cut slopes and the volume of fill material. Since the depth of the cut would be kept to a minimum, growth media removed during construction would be stockpiled as the fill slope to be used during reclamation. Road construction within drainages would be avoided where possible. When drainages must be crossed by a road, Best Management Practices (BMPs) established by the NDEP and Nevada Division of Conservation Districts through the State Environmental Commission (1994) would be followed to minimize surface disturbance and erosion potential. Culverts (18-inch minimum diameter) would be placed on roads built in steep terrain across prominent drainages and would be sized to handle a 50 year storm event. It is not anticipated that blasting would be necessary to construct roadbeds. Roads would not be constructed in areas where rock outcrops and areas of shallow soils on bedrock are present. Routine road maintenance could be required and would consist of smoothing ruts, filling holes with fill material, grading, and re-establishing waterbars when necessary.

2.1.4. Equipment

Exploration roads and drill pads, which require earth moving, would be located and constructed using standard construction practices for temporary mineral exploration roads to minimize surface disturbance, erosion and visual contrast, as well as to facilitate reclamation. Road construction would be implemented using a Cat D8L or equivalent. The proposed exploration roads and spurs would be bladed to an average width of 15 feet including side cast material, with waterbars installed as needed or as required by BLM Roads manual 9113. Every effort would be made to keep road grades at ten percent or less and would not exceed 16 percent. No ridge top roads would be constructed. Balanced cut and fill construction would be used to the extent possible to minimize the exposed cut slopes and the volume of fill material. Since the depth of the cut would be kept to a minimum, growth media removed during construction would be stockpiled as the fill slope to be used during reclamation. Road construction within drainages would be avoided where possible. When drainages must be crossed by a road, Best Management Practices (BMPs) established by the NDEP and Nevada Division of Conservation Districts through the State Environmental Commission (1994) would be followed to minimize surface disturbance and erosion potential. Culverts (18-inch minimum diameter) would be placed on roads built in steep terrain across prominent drainages and would be sized to handle a 50 year storm event. It is not anticipated that blasting would be necessary to construct roadbeds. Roads would not be constructed in areas where rock outcrops and areas of shallow soils on bedrock are present. Routine road maintenance could be required and would consist of smoothing ruts, filling holes with fill material, grading, and re-establishing waterbars when necessary.

2.1.5. Water Use

MGC has applied for a waiver to drill a water well for mineral exploration purposes in the southwest quarter of Section 35, T29N, R34E (Figure 2).

2.1.6. Work Force

As many as four drill rigs and associated drill shifts would be utilized at the Project Area during Phase I. Each drill shift crew would include approximately three contract personnel, plus a geologist. Subsequent phases could include a total of eight drill rigs or a total of 32 individuals working at any time in the Project Area. Standard drilling procedures would usually require a geologist present at each drill rig to log the hole and advise the drill operator as needed. The geologist would generally travel to and from the drill site in a separate four wheel drive pickup truck. The contract personnel would commute from the nearby communities of Lovelock and Winnemucca to the Project Area during the period of operation. Drilling activities would generally be limited to daylight hours but could continue for 24 hours per day for some drill rigs. The drill schedule would generally include one shift lasting up to 12 hours per day up to seven days per week.

2.1.7. Surface and Ground Water Control

BMPs for sediment control would be employed during construction, operation, and reclamation to minimize sedimentation from disturbed areas. Proposed construction and drilling activities would avoid springs and seeps. In order to facilitate drainage and prevent erosion, waterbars would be constructed on all bladed roads, as needed, at BLM-recommended spacings.

Sediment control structures could include, but not be limited to, fabric and/or hay bale (certified weed-free) filter fences, siltation or filter berms, mud pits, and downgradient drainage channels in order to prevent unnecessary or undue degradation to the environment. Sediment traps, constructed as necessary on drill pads, would be used to settle drill cuttings and prevent their release.

2.1.8. Solid and Hazardous Materials

All refuse generated by the Project would be disposed of at an authorized landfill facility offsite, consistent with applicable regulations. No refuse would be disposed of onsite. Water and/or nontoxic drilling fluids, including abantonite, Alcomer 120L, bentonite, EZ-mud, polyplus, and super plug, would be utilized as necessary during drilling and would be stored at the Project Area.

Hazardous materials employed at the Project Area would include diesel fuel, gasoline, and lubricating grease. Approximately 500 gallons of diesel fuel would be stored in fuel delivery systems on vehicles and drill rigs. Approximately 100 gallons of gasoline would be stored in fuel delivery systems for light vehicles. Approximately 100 pounds of lubricating grease would be stored on the drill rigs or transported by drill trucks. All containers of hazardous substances would be labeled and handled in accordance with Nevada Department of Transportation (NDOT) and Mining Safety and Health Administration (MSHA). In the event hazardous or regulated materials, such as diesel fuel, were spilled, measures would be taken to control the spill, and the BLM, NDEP, and/or the Emergency Response Hotline would be notified, as required. In addition, a spill kit would be kept onsite. If any oil, hazardous material, or chemicals are spilled during operations, they would be cleaned up in a timely manner. After clean up, the oil, noxious fluids, or chemicals and any contaminated material would be removed from the site and disposed of at an approved disposal facility.

Self-contained, portable, chemical toilets would be used for human waste. The human waste and toilet chemicals would not be buried on site.

2.1.9. Reclamation

Reclamation would be completed to the standards described in 43 CFR 3809.420 and NAC 519A. Reclamation would meet the reclamation objectives as outlined in the U.S.D.I. Solid Minerals Reclamation Handbook #H-3042-1 (BLM 1992), Surface Management of Mining Operations (NSO) Handbook H-3809-1 (BLM 1989), and re-vegetation success standards per BLM/NDEP "Revised Guidelines for Successful Mining and Exploration Revegetation" (BLM 1999). Overland travel and existing roads would be utilized as much as possible, minimizing the need for road construction. All MGC drill sites, sumps, and road construction would be recontoured. A 14-foot disturbance width has been required by the BLM to cover the width of the tire tracks. If necessary, the track disturbance would be ripped, seeded, and raked. The area would then be seeded with a BLM approved seed mix (Table 2) at the appropriate time of year for optimum seed sprouting and plant growth. The seeding would be completed using a broadcast method and then raked. Broadcast seed application would be at the rate of approximately 5.65 pounds of pure live seed per acre. Native seed would be used, when available. Only certified weed-free seed would be used for reclamation seeding. Post-reclamation maintenance would consist of remedial dirt work and reseeding, if required. Site monitoring for stability and revegetation success would be conducted once a year, either during the spring or fall, for a minimum of three years until attainment of the revegetation standards established in the Nevada Guidelines for Successful Revegetation for the Nevada Division of Environmental Protection, the Bureau of Land Management, and the USDA Forest Service (Instruction Memorandum #NV 99-013). An annual surface disturbance map and status of reclamation would be submitted to the BLM and BMRR.

Table 2: Proposed Seed Mix

Species		Application Rate (lbs/acre)
Common Name	Scientific Name	
Four-wing saltbush	<i>Atriplex canescens</i>	1.50
Lewis blue flax	<i>Linum lewisii</i>	0.20
Secar bluebunch wheatgrass	<i>Pseudoroegneria spicata ssp. spicata</i>	3.00
Sherman big bluegrass	<i>Poa secunda</i>	0.85
Wyoming big sagebrush	<i>Artemisia tridentata ssp. wyomingensis</i>	0.10
Total		5.65

¹Pure live seed

Reclamation activities on public land for the Proposed Action would be designed to achieve post exploration land uses consistent with the BLM's land use management plans for the area, which are outlined in the MFP (BLM 1982).

During exploration activities, reclamation would involve management of drilling to contain cuttings and drilling fluids, monitoring road conditions during periods of inclement weather, and keeping sites clean and safe. During seasonal closure of the Project and periods of inactivity between drilling phases, reclamation would involve filling sumps, cleaning sites, and maintaining the overall safety of the Project Area. The BLM would be notified prior to any periods of inactivity greater than three months.

After exploration activities are terminated, reclamation would involve the removal of the existing 600 feet of chain link fence on private land, regrading disturbed areas related to this Project to their approximate original contour, and seeding using the approved reclamation seed mixture and application rates furnished by the BLM. This would involve the use of mechanized equipment for earthwork and mechanical or broadcast seeding. Yearly visits to the site would be conducted to monitor the success of the revegetation for a period of three years or until revegetation success has been achieved. All temporary hazard fencing will be removed once recontouring is complete.

The post-exploration and post-reclamation topography would be essentially the same as the pre-exploration topography because only limited amounts of linear surface disturbance are planned and the majority of the Project Area is very flat.

The Project Area has been the scene of previous exploration efforts and some of the roads in the Project Area are county roads; therefore, existing access roads would not be reclaimed. Rather, only those disturbances created under the current Notice or Plan for the Project would be recontoured, if needed, ripped, and revegetated.

Exploration activities are ongoing under Notice-level and private land activities and would continue into the proposed areas upon approval of the Project. Exploration activities would occur over a ten year period; however, the actual length of exploration activities would depend on the results of the exploration work. All reclamation work, with the exception of revegetation monitoring, would be completed no later than two years after the completion of activities under this Project. MGC would conduct concurrent reclamation of disturbed areas once it is determined that the disturbance is no longer needed for Project activities. Table 3 outlines the anticipated reclamation schedule on a monthly basis, which would be followed to achieve the reclamation goals set forth above. Revegetation activities are limited by the time of year during which they could be effectively implemented. Site conditions and/or yearly climatic variations could require that this schedule be modified to achieve revegetation success. Additional reclamation activities include the abandonment of the water well and the removal of all equipment, supplies and materials brought onto public land at the end of the project life. Also, any drill holes not yet abandoned will be plugged according to NRS 534. All drill casing will be removed. If the casing cannot be readily removed then it will be cut to within two inches of the ground surface. All culverts placed during the exploration activities will be removed and the natural drainage reestablished.

Table 3: Anticipated Exploration Reclamation Schedule

TECHNIQUES	Quarter				Year(s)
	1st Jan.- Mar.	2nd April- June	3rd July- Sept.	4th Oct.- Dec.	
Regrading					Within 2 years of Project completion
Seeding					Within 2 years of Project completion
Monitoring					3 years beyond regrading and reseeding

2.1.10. Environmental Protection Measures

MGC commits to the following environmental protection measures to prevent unnecessary and undue degradation during construction, operation, and reclamation of the Project. The measures are derived from the general requirements established in the BLM's Surface Management

Regulations at 43 CFR 3809 and BMRR mining reclamation regulations, as well as other water and air quality regulations.

- All but five drill holes would be plugged prior to the drill rig moving from the drill site in accordance with NRS 534, NAC 534.4369, and NAC 534.4371. Five drill holes would be collared with a reverse circulation drill rig and completed with a core rig. If any drill hole produces artesian flow, the drill hole would be contained pursuant to NRS 534.060 and NAC 534.378 and would be sealed by the method described in Subsection 2 of NAC 534.4371. If the casings are set in a drill hole, either the drill hole must be completed as a well and plugged pursuant to NAC 534.420 or the casings would be completely removed from the drill hole and then be plugged according to NAC 534.4369 and NAC 534.4371.
- Pursuant to 43 CFR 10.4(g), MGC would notify the BLM authorized officer, by telephone, and with written confirmation, immediately upon the discovery of human remains, funerary objects, sacred objects, or objects of cultural patrimony (as defined in 43 CFR 10.2). Further pursuant to 43 CFR 10.4 (c) and (d), the operator would immediately stop all activities in the vicinity of the discovery and not commence again for 30 days or when notified to proceed by the BLM authorized officer.
- MGC would not knowingly disturb, alter, injure, or destroy any scientifically important paleontological deposits or any historical or archaeological site, structure, building, or object. If MGC discovers any cultural or paleontological resource that might be altered or destroyed by operations, the discovery would be left intact and reported to the authorized BLM officer.
- All National Register of Historic Places (NRHP) eligible and unevaluated cultural resource sites would be avoided by proposed surface disturbance including overland access routes unless mitigation through data recovery or other treatment is completed in accordance with a treatment plan approved by the BLM in conjunction with the Nevada State Historic Preservation Office. BLM approval would be required prior to surface disturbance. Avoidance measures would include a 100-foot buffer around each eligible and unevaluated site, on the ground marking, and avoidance instructions to operators in order to avoid inadvertent impacts to these sites. Travel on the existing road which passes through site CrNV-22-6920 would be allowed if no new disturbance would occur as a result of this travel as referenced in a letter and map submitted by MGC to the BLM (Bill Neal, MGC, March 1, 2007).
- On a yearly basis, on or before April 15th, MGC would submit to the BLM and BMRR a summary of exploration activities for the previous year, and a reclamation cost estimate for existing surface disturbance to ensure consistency with the current bond amount.
- Public safety would be maintained throughout the life of the Project. All equipment and other facilities would be maintained in a safe and orderly manner. As stated previously, MGC would take the following steps to promote safety: all vehicles would utilize prudent speeds; casings would be cutoff within two inches of ground level; all containers of hazardous materials would be labeled and

handled in accordance with NDOT and MSHA; each field vehicle would carry hand tools and a fire extinguisher; and all portable equipment, including drill rigs, support vehicles, and drilling supplies, would have spark arrests, if necessary, and would be removed from the Project Area during extended periods of nonoperation.

- The Sierra Pacific transmission line would be avoided by Project activities to ensure that no impacts would occur to the line, poles, or access to the right-of-way (ROW).
- MGC would perform required maintenance on county access roads as deemed necessary by Pershing County and as authorized by the Plan.
- A maintenance agreement would be implemented by Pershing County and MGC if county roads are degraded as a direct result of activities associated with the Proposed Action.
- All trenches, sumps, and other small excavations that pose a hazard or nuisance to the public, wildlife, or livestock would be adequately fenced to preclude access to them. Additionally, sumps would be constructed with ramps to minimize injury to livestock that enter them.
- Activities are restricted to frozen or dry ground conditions where feasible. Operations would be curtailed when saturated and soft soil conditions exist.
- Sediment control structures would be used and could include, but not be limited to, fabric and/or hay bale (certified weed-free) filter fences, siltation or filter berms, mud pits, and downgradient drainage channels in order to prevent unnecessary or undue degradation to the environment. Sediment traps, constructed as necessary on drill pads, would be used to settle drill cuttings and prevent their release.
- Any survey monuments, witness corners, or reference monuments would be protected to the extent economically and technically feasible. A rock monument with a scratched "x," recorded in CR2-2952(P) in site CrNV-22-8142 (feature 2), may be a cadastral survey marker and would be avoided by all Project-related activities.
- Pursuant to 43 CFR 8365.1-1(b)(3), no sewage, petroleum products, or refuse would be dumped from any trailer or vehicle.
- All applicable state and federal fire laws and regulations would be complied with, and all reasonable measures would be taken to prevent and suppress fires in the Project Area.
- Final reclamation of overland travel roads, sumps, and drill pads would consist of, if applicable, fully recontouring disturbances to their original grade and reseeding in the fall season immediately following completion of exploration activities.

- In the event that any existing roads are severely damaged as a result of MGC activities, MGC would return them to their original condition.
- Reseeding would be consistent with all BLM recommendations for mix constituents, application rate, and seeding methods.
- Only nontoxic fluids would be used in the drilling process.
- Drill cuttings and fluids would be contained onsite utilizing appropriate control measures. Sediment traps would be used, as necessary, and filled at the end of the drill program.
- Regulated wastes would be removed from the Project Area and disposed of in a state, federally, or locally designated area.
- Emissions of fugitive dust from disturbed surfaces would be minimized by utilizing appropriate control measures. Surface application of water from a water truck is the current method of dust control during high wind conditions.
- Noxious weeds would be controlled through implementation of preventive BMPs and eradication measures would be implemented if noxious weeds were found. Additionally, MGC has prepared a Noxious Weed Prevention and Control Plan to address the issue of noxious weeds in the Project Area (MGC 2006) and agrees to treat noxious weeds within the Project Area.
- Drill pads, sumps, and trenches would be reclaimed as soon as practicable after completion of logging and sampling.
- MGC would follow the Spill Prevention Plan as specified in the Plan (MGC 2006).

2.2. No Action Alternative

Under the No Action Alternative, the Proposed Action would not be approved by the BLM and exploration in the Project Area would continue under Notice NVN-078048 and State of Nevada Permit for Reclamation #0258. Surface disturbance under the Notice is approaching the five-acre limit. MGC currently has approval for up to 20 acres of disturbance on private land under their State of Nevada Permit for Reclamation. Approximately 6.63 acres are currently bonded and being disturbed. Through a phased approach, MGC could revise their Permit for Reclamation to continue work on private land. Once exploration activities under the Notice and State of Nevada Permit for Reclamation are completed, then reclamation activities consistent with the existing permits would be completed. However, the level of exploration activities that would be allowed under the No Action Alternative would not be sufficient to meet the Purpose and Need for MGC's proposed Project.

3. AFFECTED ENVIRONMENT

3.1. Introduction

The affected environment for the Project Area covers portions of Sections 34 and 35, T29N, R34E, and Section 2, T28N, R34E located on public lands to the east of the Humboldt Range in Spring Valley (Figure 2). The Proposed Action disturbance covers approximately 75 acres of public land, which includes 51.09 acres of proposed phased disturbance, 4.85 acres of Notice-level disturbance, and 6.63 acres of disturbance on private land. The photograph on the cover of this EA is an overview of the Project Area taken from Spring Valley Pass looking eastward.

Fifteen critical elements of the human environment are specifically required by statute, regulation, or executive order and must be considered in the analysis of the alternatives of all EAs. These required critical elements, whether they are present and/or potentially affected, are outlined in Table 4.

Table 4: Critical Elements of the Human Environment

Critical Element	Present	Potentially Affected	Critical Element	Present	Potentially Affected
Air Quality	Yes	Yes	Native American Religious Concerns	Yes	No
Areas of Critical Environmental Concern	No	No	Threatened & Endangered Species	No	No
Cultural Resources	Yes	No	Wastes, Hazardous/Solid	Yes	No
Environmental Justice	No	No	Water Quality (Surface & Ground)	Yes	Yes
Farmlands, Prime/Unique	No	No	Wetlands/Riparian Zones	Yes	No
Floodplains	No	No	Wild & Scenic Rivers	No	No
Invasive, Nonnative Species	Yes	Yes	Wilderness	No	No
Migratory Birds	Yes	No			

The remainder of this chapter addresses the critical elements, as well as non-critical elements identified through scoping that are present within the Project Area or could be affected by the Proposed Action or the alternatives. The noncritical elements include the following: Land Use Authorizations and Access, Rangeland Management, Social Values and Economics, Soils, Vegetation, Visual Resources, Wild Horses and Burros, and Wildlife.

The purpose of this section is to describe the existing environment of the Project Area to be affected or created by the alternatives under consideration. The following critical elements do not occur in the Project Area and, therefore, would not be impacted by the Project and are not analyzed further in this EA: Areas of Critical Environmental Concern, Prime/Unique Farmlands, Floodplains, Wild and Scenic Rivers, Threatened and Endangered Species, Environmental Justice, and Wilderness.

3.2. Air Quality

The Project Area lies east of the Humboldt Range where the climate is arid, characterized by warm, dry summers and moderately cold, dry winters. The mean annual precipitation in Lovelock, located approximately 20 miles away, is 5.28 inches, and the mean annual snowfall is 7.2 inches. The mean annual low temperature is 35.1degrees Fahrenheit (°F) and the mean annual high temperature is 67.8°F (Western Regional Climate Center 2006). The prevailing wind is from the west (NRCS 1994).

The Bureau of Air Pollution Control (BAPC) is the agency in the State of Nevada that has been delegated the responsibility for implementing a State Implementation Plan (SIP) (excluding Washoe and Clark Counties, which have their own SIP). Included in a SIP are the State of Nevada air quality permit programs (NAC 445B.001 through 445B.3485, inclusive). Also part of a SIP are the Nevada State Ambient Air Quality Standards (NSAAQSs). The NSAAQSs are generally identical to the National Ambient Air Quality Standards, with the exception of the following: (a) an additional standard for carbon monoxide (CO) in areas with an elevation in excess of 5,000 feet amsl; (b) the recently promulgated NSAAQSs for particulate matter of aerodynamic diameter less than 2.5 microns (PM_{2.5}); (c) the revised NSAAQS for particulate matter of aerodynamic diameter less than ten microns (PM₁₀); (d) ozone (O₃) (Nevada has yet to adopt the new and revised standards); and (e) a violation of a state standard occurs with the first annual exceedance of an ambient standard, while federal standards are generally not violated until the second annual exceedance. In addition to establishing the NSAAQSs, the BAPC is responsible for permit and enforcement activities throughout the State of Nevada.

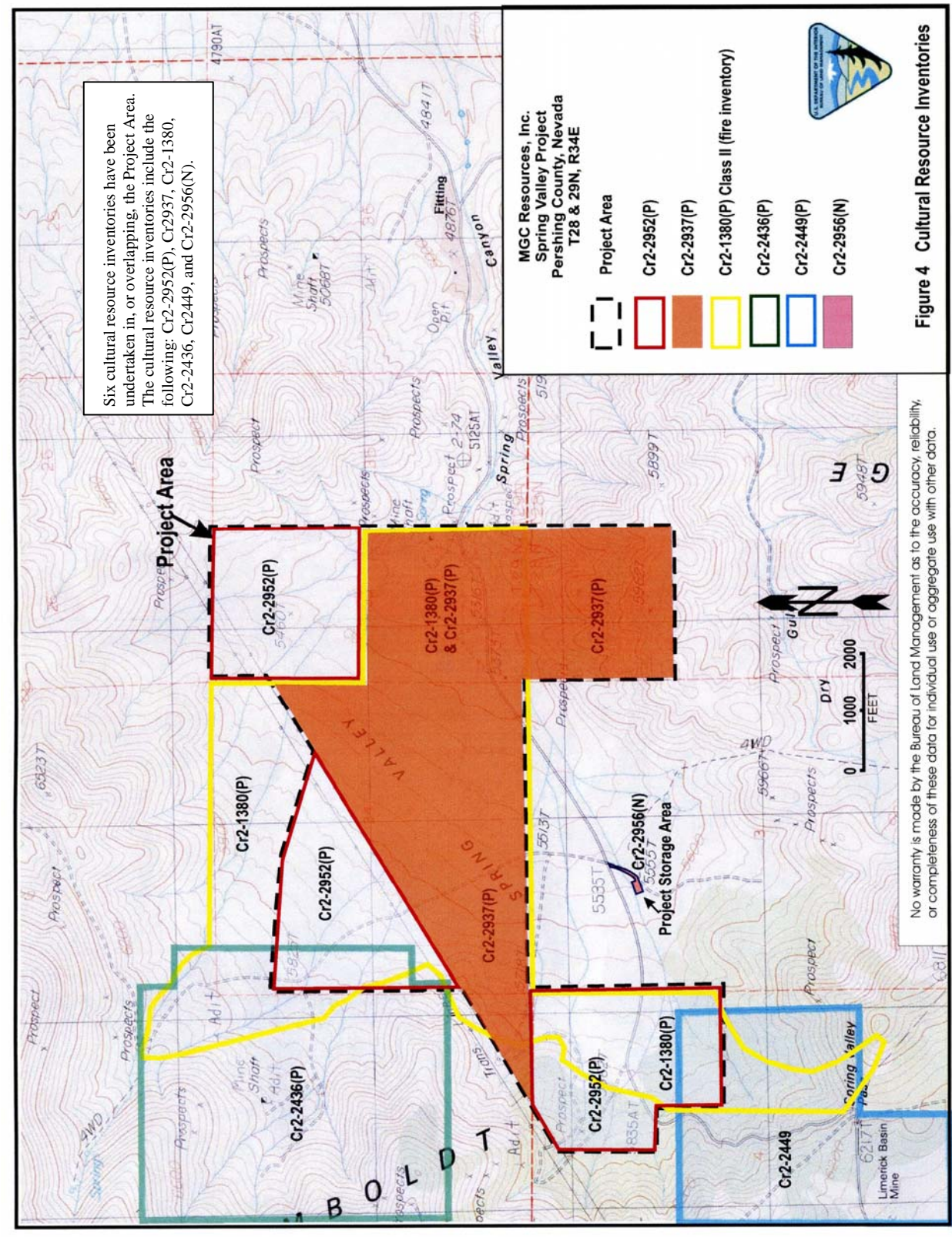
The Project Area is located within the Buena Vista Hydrographic Basin (129), which is considered “unclassified” relative to attainment of the federal air quality standards. The existing air quality is typical of largely undeveloped regions of the western United States with limited sources of pollutants.

3.3. Cultural Resources

The Area of Potential Effect (APE) for this project is the Project Area. Six cultural resource inventories have been undertaken in the Project Area (Figure 4). CR2-2436(P) was completed by Busby et al. (1991). One site, CrNV-22-5424, is located in the Project Area. This site is ineligible for the NRHP. CR2-2449(P) by Vierra and D’Angelo (1992) also included a small portion of the Project Area. No sites were recorded in the Project Area in this inventory. CrNV-22-1380 was a fire rehabilitation inventory by Zerga and Associates (2000) which included both Class III and Class II inventory acreage in the Project Area. Seven sites, CrNV-22-6916, -6917, -6918, -6919, -6920, -6921, and -6922 were recorded in the Project Area. Because this was a fire rehabilitation inventory, the sites were not evaluated for the NRHP at the time of their recordation.

CR2-2937(P), a Class III inventory of two block areas in the Project Area, was completed by SWCA (2006). Eleven cultural resource sites, (CrNV-22-7829, CrNV-22-7830, CrNV-22-7831, CrNV-22-7832, CrNV-22-7833, CrNV-22-7834, CrNV-22-7835, CrNV-22-7836, CrNV-22-7838, CrNV-22-7839, and CrNV-22-8128) were recorded within the Project Area. One additional site (CrNV-22-7837) was recorded outside of the two block inventory area boundaries, but within the Project Area. In addition to these 12 newly recorded sites, SWCA updated Intermountain Antiquities Computing System (IMACS) site forms and completed NRHP evaluations for the seven sites previously recorded by Zerga and Associates (2000) in CR2-1380(P) (see above). Additionally 27 isolates were documented.

Figure 4: Cultural Resource Inventories



Two of the 19 sites evaluated in CR2-2937(P) (CrNV-22-7836 and CrNV-22-7837) have been determined eligible for listing in the NRHP under Criterion D. One site (CrNV-22-6920) has been determined eligible for listing on the NRHP under Criterion C and D, and two sites (CrNV-22-6916 and CrNV-22-6919) remain unevaluated pending further investigation to determine eligibility for the NRHP. The remaining 14 sites (CrNV-22-6917, CrNV-22-6918, CrNV-22-6921, CrNV-22-6922, CrNV-22-7829, CrNV-22-7830, CrNV-22-7831, CrNV-22-7832, CrNV-22-7833,

CrNV-22-7834, CrNV-22-7835, CrNV-22-7838, CrNV-22-7839, and CrNV-22-8128) have been determined to be ineligible for listing on the NRHP.

ASM Affiliates (2006) conducted a Class III cultural resources inventory, CR2-2952(P) on additional parcels in the APE. This survey resulted in the discovery of 29 new cultural resource sites (CrNV-22-8138 through CrNV-22-8166) and 37 isolated finds. Of the 29 new sites, three (CrNV-22-8152, CrNV-22-8161, and CrNV-22-8166) have been determined eligible for listing on the NRHP under Criterion D. Two historic sites, CrNV-22-8142 and CrNV-22-8147, are recommended to remain unevaluated since the full nature and extent of those sites have not been examined and their associations to the historic context of the area are still in question. The remaining 26 sites, CrNV-22-8138 through CrNV-22-8151, CrNV-22-8153 through CrNV-22-8160, and CrNV-22-8162 through CrNV-22-8165) have been determined to be not eligible for listing on the NRHP.

The BLM (McGuckian 2006), CR2-2956(N), completed a survey of the 0.2 acre fenced portion of private land that is used for storage. No cultural sites were recorded.

3.4. Invasive, Nonnative Species

An "invasive species" is defined as a species that is nonnative to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112). Invasive, nonnative species are species that are highly competitive, highly aggressive, and easily spread. They include plants designated as "noxious" and animals designated as "pests" by federal or state law. There are no known invasive, nonnative animal species (pests) that are mandated for control in the Project Area; therefore pests are not further addressed in this EA.

The BLM defines "noxious weed" as "a plant that interferes with management objectives for a given area of land at a given point in time" (BLM 1996). The BLM Nevada strategy for noxious weed management is to "prevent and control the spread of noxious weeds through local and regional cooperative efforts... to ensure maintenance and restoration of healthy ecosystems on BLM-managed lands. Noxious weed control would be based on... prevention, education, detection, and quick control of small infestations" (BLM 1997). The BLM's Nevada State Office maintains a "Nevada Noxious Weed List." Animal species designated as "pests" are generally species that are injurious to agricultural and nursery interests or vectors of diseases, which could be transmissible and injurious to humans.

There are laws, executive orders, regulations, policies, and agreements that pertain to invasive nonnative species, including the following: Executive Order 11312 (Prevention and Control of Invasive Species); Federal Noxious and Invasive Weed Laws; BLM Manuals and Partners Against Weeds Action Plan; BLM Cooperative Agreements; and NRS and NAC, Chapter 555.

A noxious weed survey was conducted on September 5, 2006 (Enviroscientists, Inc. 2006). The survey focused on areas of recent disturbance and locations where standing or running water was present. Populations of noxious weeds were recorded with Geographic Positioning System (GPS) points. Two species of noxious weeds, Russian knapweed (*Acroptilon repens*) and tamarisk (*Tamarisk* sp.), were encountered in the survey area. Russian knapweed was located in several locations within the Project Area that had been disturbed prior to MGC's exploration project. Although the Russian knapweed in the Project Area had been browsed by livestock, flowers were present and the plant could be identified. Russian knapweed was present on approximately 1.29 acres of the Project Area. Tamarisk occurrences were limited to locations where water was present and at the four constructed ponds utilized for placer mining prior to MGC's exploration project. A copy of the report and occurrence map is included in Appendix A.

Also present in the Project Area is Iberian star-thistle (*Centaurea iberica*), which is classified under Nevada Law (NAC 555.010) as a Class A Noxious Weed, which means that active eradication of the infestation is required (personal communication, Derek Messmer, BLM Rangeland Management Specialist, November 7, 2006). The infestation was identified by BLM during weed abatement in Spring Valley. The star-thistle was located within approximately twenty feet of an exploration road on the south side of Spring Valley Road. This is the first time the species has been documented within the Winnemucca Field Office. The star-thistle was treated by the BLM on September 27, 2006, but will require follow-up treatment until the seed bed is eliminated.

3.5. Migratory Birds

"Migratory bird" means any bird listed in 50 CFR 10.13. All native birds found commonly in the United States, with the exception of native resident game birds, are protected under the Migratory Bird Treaty Act (MBTA). The MBTA prohibits taking of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, signed January 10, 2001, directs federal agencies to protect migratory birds by integrating bird conservation principles, measures, and practices.

Additional direction comes from the Memorandum of Understanding (MOU) between the BLM and the United States Fish and Wildlife Service (USFWS), signed January 17, 2001. The purpose of this MOU is to strengthen migratory bird conservation through enhanced collaboration between the BLM and USFWS, in coordination with state, tribal, and local governments. The MOU identifies management practices that impact populations of high priority migratory bird species, including nesting, migration, or over-wintering habitats, on public lands, and develops management objectives or recommendations that avoid or minimize these impacts. Approximately 400 bird species have been reported in Nevada with more than 240 species recorded as breeding in the state. The species of migratory birds known to have a distribution that overlaps with the Project Area, according to the Nevada Breeding Bird Atlas, are listed in Table 5 (Great Basin Bird Observatory 2006).

Table 5: Migratory Bird Species with a Distribution that Overlaps the Project Area

Common Name	Scientific Name	PIF1 “Long term Planning and Responsibility Species”	NVPIF2 “Priority Species”
Black-throated gray warbler	<i>Dendroica nigrescens</i>	Yes	Yes
Black rosy-finch	<i>Leucosticte atrata</i>	Yes	Yes
Brewer’s sparrow	<i>Spizella breweri</i>	No	Yes
Ferruginous hawk	<i>Buteo regalis</i>	No	Yes
Gray flycatcher	<i>Empidonax hammondi</i>	Yes	Yes
Mountain bluebird	<i>Sialia currucoides</i>	Yes	No
Piñon jay	<i>Gymnorhinus cyanocephalus</i>	Yes	Yes
Prairie falcon	<i>Falco mexicanus</i>	No	Yes
Sage sparrow	<i>Amphispiza belli</i>	Yes	Yes
Sage thrasher	<i>Oreoscoptes montanus</i>	Yes	Yes
Short-eared owl	<i>Asio flammeus</i>	No	Yes
Vesper sparrow	<i>Pooecetes gramineus</i>	No	Yes
Western scrub jay	<i>Aphelocoma californica</i>	Yes	No
Black-throated sparrow	<i>Amphispiza bilineata</i>	Yes	No
Burrowing owl	<i>Athene cunicularia</i>	No	Yes
Loggerhead shrike	<i>Lanius ludovicianus</i>	No	Yes
Swainson's hawk	<i>Buteo swainsoni</i>	Yes	Yes
Western bluebird	<i>Sialia mexicana</i>	No	Yes

¹Partners in Flight²Nevada Partners in Flight

In addition, Nevada Division of Wildlife (NDOW) reports that a number of nesting raptors could be present in the Project Area, including but not limited to the northern goshawk (*Accipiter gentilis*), Cooper’s hawk (*Accipiter cooperii*), red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), great horned owl (*Bubo virginianus*), and long-eared owl (*Asio otus*) (NDOW 1985).

The following bird species with distribution that overlaps the Project Area are designated as BLM Nevada Sensitive Species: black rosy-finch; ferruginous hawk; juniper titmouse (*Baeolophus griseus*); pi on jay; prairie falcon; short-eared owl; vesper sparrow; burrowing owl; loggerhead shrike; Swainson’s hawk; northern goshawk; golden eagle; and long-eared owl (personal communication, Ken Detweiler, BLM Wildlife Biologist, May 2006).

3.6. Native American Religious Concerns

Federal legislation and executive orders dictate that federal agencies must consider the repercussion of their actions when Native American traditions and religious practices are involved. Therefore, the BLM must make efforts to identify locations having traditional cultural or religious values to Native Americans and insure that land management actions do not unduly or unnecessarily burden the pursuit of traditional religion or life ways by inadvertently damaging important locations or hinder access to them.

The Lovelock Paiute Tribe was contacted by letter by the BLM on February 9, 2006, to inform the Tribe of the proposed project and to solicit information on any traditional cultural properties, sacred sites or other concerns the Tribe might have. Peggy McGuckian, BLM archeologist, followed up the letter with a meeting with Mr. Alfred Happy, Jr., the Tribal Chair of the

Lovelock Paiute Tribe on April 12, 2006, to discuss the proposed Project and to determine if the Tribe had any concerns. No traditional cultural properties or sacred sites were identified. The Tribe's only concerns were that public access through the Project Area be maintained and that all necessary precautions be taken to insure the safety of the public during mining operations.

3.7. Wastes, Hazardous and Solid

Hazardous and solid wastes within the Project Area consist of solid wastes, such as refuse, paper, and other inert materials, generated for Project activities. In addition, hazardous nontoxic materials would be used in the Project Area including fuels used to operate equipment associated with Project activities. Section 2.1.10 of this EA outlines the amounts and management of these wastes and hazardous materials.

3.8. Water Quality

The Project Area covers a portion of the Buena Vista Valley Hydrographic Basin (129). The hydrology consists of both surface and ground water systems.

3.8.1. Surface Water

Surface water in the Project Area consists of a pond constructed for placer mining in the 1950s in the southwest quarter of Section 35, T29N, R34E, two springs located outside of and near the northeastern Project boundary with perennial flow downgradient from springs, storm events, and snowmelt. Surface water flow in the ephemeral streams drains from the ranges onto the valley floors and typically infiltrates into the alluvial deposits within the valleys and basins. During high runoff periods, surface water flows could continue onto the lower elevation areas where evaporation occurs.

Surface water sampling occurred in February 2006 from a spring and a pond located within the Project Area. Analyses indicate that the surface water in the Project Area meets all standards, with three exceptions. In the spring sampled, the drinking water standard was exceeded for barium and the secondary drinking water standard was exceeded for iron. The secondary drinking water standard was also exceeded for total dissolved solids (TDS) in the pond sampled. Sampling results from the pond and spring are summarized in Appendix B (Table 1).

3.8.2. Ground Water

Placer mining thought to have been conducted in the Project Area in the 1950s produced two uncapped artesian wells (Section 34, T29N, R34E) that have flowing water that pours out on the ground and enters Spring Valley Canyon (Figure 1). There is a third, capped artesian well located within the Project Area as well. There is minimal flow associated with the capped well. Ground water in the Project Area is supplied by a confined aquifer. However, specific knowledge of the ground water conditions in the Project Area is limited. In the last two years of drilling, only five out of 235 drill holes have gone artesian and there has been no problem in plugging the holes (personal communication, Bill Neal, MGC, November 3, 2006). The artesian conditions are limited to a very small area that appears to be related to an alluvial channel that runs along the Spring Valley drainage. The basin appears to be recharged by annual precipitation. The artesian condition appears to be related to mud layers interbedded within the gravels that cause the water to pond up behind the mud. According to the drillers notes, water levels range from approximately five to 20 feet to 200 feet depending on where the holes are

drilled in the basin. The water is warm, perhaps 95 to 100 degrees. This is evident by the lack of freezing during the winter months.

Ground water was sampled from the two uncapped artesian wells in December of 2005 and February of 2006. Ground water was also sampled below an adit located within the Project Area in February 2006. Results from the water testing show that the ground water in the Project Area meets all standards. Complete results from water sampling are provided in Appendix B (Table 2).

3.9. Wetlands/Riparian Zones

Wetland/riparian areas are some of the most productive resources found on BLM-administered lands. Wetland habitats provide important ecological functions such as habitat diversity, ground water recharge, sediment uptake, and run-off treatment. These functions become more important when wetlands are scarce in the landscape. In addition, wildlife utilize wetland/riparian areas disproportionately more than any other type of habitat.

The BLM is required by statutes to meet national water quality goals in the management of water resources within its management areas. Water quality goals are considered in approval of projects on BLM-administered lands.

Artificial wetlands have formed around the uncapped artesian wells within the Project Area (personal communication, Craig Drake, BLM Hydrologist, February 23, 2006). These created wetlands are limited in extent and function. MGC would continue water sampling at the wells, otherwise these wetland areas would be avoided by all other Project-related activities.

3.10. Land Use Authorizations and Access

Land uses within and around the Project Area primarily consist of the Valmy to Tracy Sierra Pacific transmission line ROW, a Pershing County road, mineral exploration, livestock management, and dispersed recreation. Placer mining was conducted in the area in the 1870s, 1950s, and 1980s. Limerick Canyon Road and Spring Valley Road are county roads. Access for operations within the Project Area would be primarily on existing exploration roads and via overland travel.

Roads in the general area provide access to mining claims, both patented and unpatented, mining exploration, private land, grazing allotments, dispersed recreation, vegetation management, emergency fire suppression, and other BLM administrative duties. Roads within and adjacent to the Project Area consist of county roads and historic mining/exploration and four wheel drive roads.

Ongoing activities in the Project Area include transmission line maintenance by Sierra Pacific and county road maintenance.

3.11. Rangeland Management

The Project site is located within the Star Peak Allotment, which consists of 187,038 acres and is presently managed for approximately 972 sheep animal unit months (AUMs) annually from April 25 through September 30 and 2,609 AUMs annually for cattle from April 1 through December 31. An AUM represents the amount of forage required to support one animal for one month. The Star Peak Allotment consists of 86,900 acres of public land and 100,138 acres of

private land, for a total of 187,038 acres. There are approximately 52 average acres per AUM for the Star Peak Allotment (personal communication, Derek Messmer, BLM Rangeland Management Specialist, February 24, 2006).

3.12. Social Values and Economics

The Project is located in Pershing County. The closest cities providing a variety of services and lodging are Lovelock and Winnemucca. The population of Pershing County was estimated to be 6,631 in 2004 (State of Nevada Demographer 2006). The 2004 population estimates for Lovelock and Winnemucca were 2,381 and 7,249 respectively (State of Nevada Demographer 2006).

The December 2005 unemployment rate for Pershing County was 5.3 percent (Nevada Workforce Informer 2006). The unemployment rate for the State of Nevada for December 2005 was 3.5 percent (Nevada Workforce Informer 2006). According to the 2000 Census, 17.9 percent of the housing in Pershing County was vacant. The median household incomes in Pershing County and the State of Nevada in 2003 were \$37,079 and \$45,249, respectively (United States Census Bureau 2006).

The city of Lovelock, which is the Pershing County Seat, provides a variety of services including restaurants, gas stations, and stores as well as a variety of lodging or housing options. Winnemucca, located in Humboldt County, also provides a wide range of services and lodging.

During Phase I, up to 12 individuals would be contracted by MGC to conduct exploration activities. Subsequent phases could require contracting up to 32 individuals to conduct exploration activities. A maximum of three drill rigs would be utilized at the Project Area during Phase I and a maximum of eight drill rigs could be operating simultaneously in the Project Area during subsequent phases. Each drill shift crew would include approximately three contract personnel and one geologist. Temporary housing would be secured in Lovelock or Winnemucca because many of these contractors do not live in Lovelock or Winnemucca.

3.13. Soils

Soils within the Project Area are typical of valley fans and steep mountain slopes of the north-central Great Basin. Slopes vary from valley fans with medium runoff to steep slopes with rapid runoff. Soils in the Project Area were mapped by the U.S. Soil Conservation Service (now known as the Natural Resource Conservation Service [NRCS]), the BLM, and the University of Nevada Agricultural Experiment Station, as part of an Order III Soil Survey of the eastern part of Pershing County (NRCS 1994). The map units delineated in the vicinity of the Project Area include the following soil associations: Roca-Reluctan, Slaven-Iver-Cleavage, and Cortez. Characteristics of the soil series comprising these associations are outlined in Table 6. The soils consist of gravelly very fine sandy loam to very gravelly loam to very cobbly loam. According to the NRCS, the erosion potential by water for the various soils found in the Project Area varies from slight to severe and the erosion potential by wind for all soils in the Project Area is slight (Table 6). However, the 1999 Rochester fire in the Project Area burned the vegetation and left the soil less protected and more prone to erosion.

3.14. Special Status Species

Special status species are those species for which state or federal agencies afford additional level of protection by law, regulation, or policy. For the purpose of this EA, special status species meet one or more of the following criteria:

- Listed as rare, threatened, or endangered by a state or federal agency;
- Proposed to be listed as rare, threatened, or endangered by a state or federal agency;
- Tracked by the Nevada Natural Heritage Program (NNHP); or
- Included in the BLM Nevada Sensitive Species List.

There are no documented occurrences of special status species within the Project Area; however, suitable habitat could be available for the following two Nevada BLM Sensitive Species: windloving buckwheat (*Eriogonum anemophilum*) and Goodrich biscuitroot (*Cymopterus goodrichii*) (NNHP, Department of Conservation and Natural Resources, letter dated December 21, 2005) (Appendix C). As requested by the BLM, locations within the Project Area with potential suitable habitat for these plant species were examined during the noxious weed survey conducted by Enviroscientists (2006). No habitat or evidence of special status plants were found.

Section 3.5 lists bird species that are designated Nevada BLM Sensitive Species, which have a distribution that overlaps the Project Area.

Table 6: Soils in the Project Area

Associa tion	Soil Series	Range in Depth to Bedrock	Landscape position/ % Slope	Profile Soil Texture	Permeability	Runoff	Erosion Hazard by Water	Erosion Hazard by Wind
Roca-Reluctan (901)	Roca	20-40"	Side slopes south facing 30 -50 %	Very cobbly loam	Very slow	Rapid	Moderate	Slight
	Reluctan	20-40"	Side slopes north & east facing 30-50 %	Gravelly loam	Moderately slow	Rapid	Severe	Slight
Slaven-Iver-Cleavage (1291)	Slaven	20-40"	South- facing side slopes of mountains 30-50%	Gravelly very fine sandy loam	Slow	Rapid	Severe	Slight
	Iver	Seasonal high water table >60"	North- facing side slopes of mountain 30-50%	Gravelly silt loam	Moderate	Rapid	Severe	Slight
	Cleavage	14-20"	North- facing side slopes of mountain 30-50%	Very gravelly loam	Moderately slow	Rapid	Moderate	Slight
Cortez (1500)	Cortez	Hardpan 22-36"	Valley fans on mountains slopes 2-8 %	Very fine sandy loam	Above duripan - very slow; Below duripan - rapid	Medium	Slight	Slight

Source: NRCS 1994

Although the Project Area is also classified as summer, winter, and nesting habitat for the greater sage grouse by the NDOW, no leks are located within at least two miles of the Project Area (personal communication, Ken Detweiler, BLM Wildlife Biologist, February 23, 2006). Additionally, habitat for sagebrush-obligate species, including the greater sage grouse and pygmy rabbit, was eliminated by the 1999 Rochester fire within the Project Area.

3.15. Vegetation

The Project Area is located in the Intermountain Region in the Central Great Basin Section of the Great Basin Division. The Project Area is located just east of the Humboldt Range, a narrow, steep range with high relief. The 1999 Rochester fire in the Project Area eliminated all of the vegetation in the vicinity. The BLM seeded the Project Area and vicinity in 1999 with a seed mix shown in Table 7.

Table 7: Seed Mix Used to Seed the Project Area after the 1999 Rochester Fire

Species Name		Application Rate (lbs1/acre)
Common Name	Scientific Name	
Forage kochia	<i>Kochia prostrata</i>	0.35
Fourwing saltbush	<i>Atriplex canescens</i>	1.00
Hycrest crested wheatgrass	<i>Agropyron cristatum</i>	1.70
Ladak alfalfa	<i>Medicago falcata</i> cv. <i>Ladak</i>	0.90
Lewis blue flax	<i>Linum lewisii</i>	0.20
Secar bluebunch wheatgrass	<i>Pseudoroegneria spicata</i> ssp. <i>spicata</i>	0.85
Sherman big bluegrass	<i>Poa secunda</i>	0.85
Wyoming big sagebrush	<i>Artemisia tridentata</i> ssp. <i>wyomingensis</i>	0.10
Total		5.95

¹Pure live seed

3.16. Visual Resources

Scenic quality is a measure of the visual appeal of a parcel of land. Section 102(a)(8) of the Federal Land Policy and Management Act of 1976 emphasizes protection of the quality of scenic resources on public lands. Section 101(b) of NEPA requires that measures be taken to ensure that aesthetically pleasing surroundings be retained for all Americans.

The Project Area is located in a Class IV Visual Resource Management (VRM) area (personal communication, Joey Carmosino, BLM Outdoor Recreation Planner, February 13, 2006). The objective of this class is to provide for management activities that allow for major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. Management activities could dominate the view and be the major focus of viewer attention.

However, every attempt should be made to minimize the impact of such activities through careful location, minimal disturbance and repeating the basic elements of line, form, color, and texture (BLM 1986). A Class III VRM area occurs approximately one mile west of the Project Area (personal communication, Joey Carmosino, BLM Outdoor Recreation Planner, February 13, 2006).

A Visual Contrast Rating Worksheet has been completed for the Project and is included as Appendix D. The Project occurs in a broad bowl-like basin surrounded by hills on three sides. The hills have moderate to steep slopes. Linear features predominate the view in the form of roads, hill and basin contacts, and vegetation changes. The majority of native vegetation was burned in 1999 in a wildland fire. Only a few isolated junipers survived. The area was reseeded after the fire and is now covered with a variety of yellow to tan, native and nonnative grasses and forbs. From the key observation point (KOP) at the top of Spring Valley Pass (Figure 2), the foreground is composed of gray burned sagebrush, green annual and perennial grasses, and dark green juniper trees. The middleground is yellow/tan to gray/pink with dark blue mountains in the background. The foreground texture is very coarse and patchy. The middleground appears soft

and velvety with patchy changes in color from vegetation differences. The background has a soft, fine-grained texture.

3.17. Wild Horses and Burros

Herd Areas (HAs) are defined as "the geographic area identified as having been used by a herd as its habitat in 1971" (43 CFR 4700.0-5). The Project Area is located within the Humboldt HA (NV-224), one of 35 HAs originally delineated in the Winnemucca District following passage of the Wild Free-Roaming Horses and Burros Act of 1971 (Public Law 92-195 as amended) and analyzed in the MFP (BLM 1982). The MFP Record of Decision, signed in May 1988, identified the removal of wild horses from checkerboard HAs unless a cooperative agreement providing for their retention and protection was consummated with affected private landowners. No cooperative agreements were obtained. Wild horses were gathered and removed from the Humboldt HA and other checkerboard HAs in the early 1990s. The Humboldt HA was not designated as a Herd Management Area (HMA) and is not managed for wild horse populations, although a few remnant animals remain in the area.

The Humboldt HA is comprised of two connecting mountain ranges, the Humboldt Range and the West Humboldt Range. The HA is bordered on the west and north by Interstate 80, on the east by Buena Vista Valley, and on the south by Dixie Valley. The elevation in the HA ranges from 4,000 feet to 9,834 feet. The area is approximately 441,900 acres and checkerboard in pattern of which about 55 percent is public lands and 45 percent is private (personal communication, Glenna Eckel, BLM Horse Specialist, February 23, 2006).

Although the objective is to maintain the area free of wild horses, a few small bands remain. In the summer of 2005, BLM personnel reported a band of twelve horses east of Oreana near Rochester Canyon and another small band east of Fossil Hill in the Buena Vista Valley. A band of fifteen horses has been reported on Buffalo Mountain. Future gathers may be proposed to remove animals; however, it is difficult to capture and remove 100 percent of the wild horses. Wild horses may move into the area from nearby HAs/HMAs as well. Therefore, small populations of wild horses are expected to occur in this area for the foreseeable future (personal communication, Glenna Eckel, BLM Horse Specialist, February 23, 2006).

3.18. Wildlife

The wildlife species that inhabit the Project Area are typical of the arid/semi-arid environment in the central Great Basin. The common species of wildlife known to populate Spring Valley include blacktailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), raven (*Corvus corax*), horned toad (*Phrynosoma platyrhinos*), and rattlesnake (*Crotalus viridis*). No fauna were observed in a cultural survey conducted by SWCA (2006); however, tracks, scat, and carcasses were evident in the Project Area. The Project Area is currently characterized as having poor wildlife habitat as a result of the 1999 Rochester fire. Greater sage grouse, a special status species is discussed earlier in Section 3.8.

The Project Area is classified as mule deer Class B summer habitat by the NDOW (personal communication, Ken Detweiler, BLM Wildlife Biologist, February 23, 2006); however the 1999 Rochester fire in the Project Area eliminated vegetation that could be utilized by mule deer for cover. The vegetation in the Project Area mostly consists of grasses that have regrown since the fire; therefore, mule deer could only utilize the vegetation in the Project Area for forage.

Year-round habitat for pronghorn antelope (*Antilocarpa americana*) is present throughout the Project Area (personal communication, Ralph Phenix, NDOW, November 6, 2006). Pronghorn antelope prefer low sagebrush and northern desert shrub vegetation communities, which are limited within the Project Area because of the fire of 1999.

4. ENVIRONMENTAL CONSEQUENCES

4.1. Proposed Action

4.1.1. Air Quality

Travel on dirt roads, drilling, and excavation activities within the area of the Proposed Action would create fugitive dust, causing a minor impact to air resources. As described in the Proposed Action, fugitive dust would be controlled by minimizing surface disturbance. Speed limits on access roads would be observed, and travel on roads within the Project Area would be conducted at prudent speeds. Impacts would also be controlled by using water trucks for dust suppression, if required. Pursuant to NAC 445B.22037.4(b), MGC would be required to operate under a Surface Area Disturbance (SAD) Permit issued by the NDEP's BAPC before the Proposed Action disturbs more than 20 acres. The SAD would require MGC to file a Dust Control Plan that itemizes the measures to be taken to control fugitive dust and vehicle emissions. Reclamation of proposed surface disturbance would gradually eliminate long-term impacts to air resources.

4.1.2. Cultural Resources

There would be no impact to cultural resources as a result of the Proposed Action because all NRHP eligible and unevaluated cultural resource sites would be avoided or mitigation measures would be implemented per Section 2.1.10.

4.1.3. Invasive, Nonnative Species

New surface disturbance from the Proposed Action would increase the potential for and promote the establishment and spread of invasive, nonnative, and noxious weeds. These impacts would be low based on implementation of the following BMPs: concurrent reclamation efforts; operator control; removal of invasive, nonnative, and noxious weeds on reclaimed areas; washing of vehicles prior to entering the Project Area; and avoiding areas of invasive, nonnative, and noxious weeds during periods when the weeds could be spread by vehicles as outlined in MGC's Noxious Weed Monitoring and Control Plan (MGC 2006) (Appendix A). This weed plan provides management strategies and provisions for annual monitoring and treatment of noxious weeds. The Noxious Weed Monitoring and Control Plan also outlines an initial survey to determine the occurrence of noxious weeds within the Project Area. Russian knapweed, hoary cress (*Cardaria draba*), and saltcedar or tamarisk are known to occur along Spring Valley Road that runs through the Project Area and there is an unconfirmed report of Canada thistle (*Cirsium arvense*) in the Project Area (personal communication, Derek Messmer, BLM Rangeland Management Specialist, February 16, 2006). In addition, Iberian star-thistle was recently found within the Project Area and has been treated by the BLM. Only Russian knapweed and tamarisk were recorded during the survey conducted at the Project Area (Enviroscientists, Inc. 2006). These activities would not affect the ongoing weed treatment program currently conducted by Pershing County on the county-maintained road through the Project Area.

Also outlined in the Noxious Weed Monitoring and Control Plan, the BLM and MGC would cooperate to inventory and monitor noxious weeds within areas of Project-related disturbance within the Project Area. MGC would treat any noxious weed infestations that result from ground disturbing activities within the Project Area for at least a three year period following the completion of the Project. Treatments would be permitted, applied, and recorded per BLM policy. The BLM and MGC would cooperate to monitor the effectiveness of treatments on noxious weeds.

The Proposed Action proposes mostly overland travel that would be located in a grassland vegetation community, which based on previous Notice-level work, has a high potential for natural revegetation. The identification of individual travel routes during monitoring is difficult. Therefore, the ability to locate and treat all of invasive, nonnative species per the Noxious Weed Monitoring and Control Plan would be reduced.

4.1.4. Migratory Birds

The Proposed Action would result in approximately 75 acres of surface disturbance. In addition, The Proposed Action does not include measures to avoid nesting migratory birds. Therefore, the destruction of active nests or disruption of breeding behavior of migratory bird species could occur as a result of the Proposed Action. In addition, destruction of active nests or disruption of breeding behavior of BLM Nevada Sensitive Species birds could occur as a result of the Proposed Action.

4.1.5. Native American Religious Concerns

No impacts to traditional cultural properties, sacred sites or Native American Religious Concerns are anticipated. The Lovelock Tribe expressed concerns about access and safety. Impacts to access and safety are not anticipated since access would continue to be open to the public via the county road which passes through the Project Area and safety requirements would be enforced, ensuring the safety of the public (refer to Section 2.1.10).

4.1.6. Hazardous and Solid Waste

Generation of wastes and the use of hazardous materials as a result of the Proposed Action could result in the release of wastes or materials. Hazardous and solid wastes within the Project Area would consist of solid wastes, such as refuse, paper, and other inert materials, generated for Project activities. In addition, hazardous nontoxic materials would be used in the Project Area that include fuels used to operate equipment associated with Project activities and drilling fluids, including abantonite, Alcomer 120L, bentonite, EZ-mud, polyplus, and super plug (Section 2.1.8). The Material Safety Data Sheets for each of the drilling fluids indicate that all are nontoxic.

MGC's Spill Prevention Plan (MGC 2006) outlines how wastes and materials would be managed and how a spill would be addressed. Therefore, the Proposed Action would have a minimal impact from hazardous and solid wastes.

4.1.7. Water Quality

Surface Water Resources

The Proposed Action is unlikely to degrade water quality. A Spill Prevention Plan is included in the Plan and would be implemented to control drilling fluids and petroleum products. All containers of hazardous substances would be labeled and handled in accordance with NDOT and MSHA regulations (Section 2.1.8).

Impacts would be minimal due to the use of nontoxic drilling fluids and adherence to NAC 534.4369 and 534.4371. By implementing BMPs for road and drill pad construction, impacts to

surface water resources would be minimized. Any residual impacts would only be temporary, lasting until exploration roads and drill pads are successfully reclaimed and revegetated.

Ground Water Resources

All but five drill holes would be plugged prior to the drill rig moving from the drill site in accordance with NRS 534, NAC 534.4369, and NAC 534.4371. Five drill holes would be collared with a reverse circulation drill rig and completed with a core rig. If any drill hole produces artesian flow, the drill hole would be contained pursuant to NRS 534.060 and NAC 534.378 and would be sealed by the method described in Subsection 2 of NAC 534.4371. If the casings are set in a drill hole, either the drill hole must be completed as a well and plugged pursuant to NAC 534.420 or the casings would be completely removed from the drill hole and then be plugged according to NAC 534.4369 and NAC 534.4371.

All but five drill holes would be surveyed and plugged as an operational procedure immediately after completion of drilling in accordance with NAC 534.421 and 534.425. The remaining five drill holes would be plugged according to NAC 534 once the core drilling was completed.

The Project design and environmental protection measures would ensure that the Proposed Action does not cause a change in water quality that results in an exceedance of the applicable NDEP standards. By monitoring water quality before, during, and following exploration activities, MGC would be certain that no degradation of water quality occurred as a result of Project activities.

4.1.8. Wetlands/Riparian Zones

Drilling and surface disturbance activities would avoid the created wetlands within the Project Area; therefore, there would be no impact to wetlands.

4.1.9. Land Use Authorizations and Access

The Project Area would not be withdrawn from other authorized land uses during implementation of the Proposed Action. Any new applications for land uses would be evaluated according to the laws and policies for issuance of ROWs or other land use authorizations. The Sierra Pacific transmission line traverses a portion of the Project Area and would be avoided by Project activities to ensure that no impacts would occur to the line, poles, or access to the ROW.

Existing roads in the Project Area would continue to be open for access to mining and exploration operations, livestock management, dispersed recreation, and administrative purposes. MGC would perform required maintenance on county access roads as deemed necessary by Pershing County and as authorized by the Plan. Impacts to the county road would be avoided through a maintenance agreement between Pershing County and MGC if this road are degraded as a direct result of activities associated with the Proposed Action (personal communication, Brian Green, Pershing County Road Supervisor, February 17, 2006).

The Proposed Action would result in a minimum of changes to land use in the Project Area with regard to recreation and grazing in the vicinity of the Project surface disturbance. Any potential impacts to livestock grazing and rangeland resources are addressed in Section 3.14 (Rangeland Management). The impacts on land use authorizations, access, and roads would be minimal.

4.1.10. Rangeland Management

A potential temporary loss of up to two AUMs could result from the Proposed Action. This is less than one percent of the initial stocking level for the allotment. Exploration sumps would be constructed with ramps to minimize injury to livestock that enter them; therefore, the impact of the Proposed Action on rangeland resources would be minimal.

4.1.11. Social Values and Economics

The Proposed Action would have impacts on the local economies as the contract workers would obtain lodging, meals, and supplies in the nearby towns and would most likely be based out of Lovelock or Winnemucca. No additional facilities or housing would need to be constructed and the maximum workforce of 32 persons would not strain the local housing supply or other services. Impacts from the Project on the local economies would be temporary.

4.1.12. Soils

Surface disturbance associated with the Proposed Action would impact up to 75 acres of soils. The soil associations in the Project Area vary from slight to severe for erosion hazard by water and are all slight for erosion hazard by wind; therefore, the greatest potential source for erosion in the Project Area is by water (Table 6).

Exploration activities associated with the Proposed Action would increase the erosion potential for wind and water of disturbed soils until reclamation was successfully completed. The potential impacts to soils would be reduced by measures incorporated in the Project design, including the use of waterbars and other BMPs, and the concurrent reclamation of drill pads, sumps, trenches, and drill roads no longer needed for access. Following successful reclamation, which would include regrading, ripping, and revegetation of disturbed areas, soil loss due to the Proposed Action would be temporary and minimal.

4.1.13. Special Status Species

Section 3.5 lists bird species that are designated Nevada BLM Sensitive Species, which have a distribution that overlaps the Project Area. Potential impacts to these species were addressed previously in Section 4.1.4. No habitat or evidence of special status plants were found in the Project Area (Enviroscientists 2006). Also, no greater sage grouse leks are located within at least two miles of the Project Area (personal communication, Ken Detweiler, BLM Wildlife Biologist, February 23, 2006) and habitat for sagebrush-obligate species, including the greater sage grouse and pygmy rabbit, was eliminated by the 1999 Rochester fire within the Project Area. Therefore, the Proposed Action would not result in a substantial net loss of potential habitat and would not contribute to a loss of viability for any one special status species.

4.1.14. Vegetation

The Proposed Action would result in surface disturbance of approximately 75 acres of vegetation. The disturbance would be created incrementally and dispersed throughout the Project Area. Reclamation would begin upon completion of exploration activities using a BLM recommended seed mix of native species (Table 2). In addition, the disturbance would be mostly linear (roads) or patchy (drill pads) in form, and therefore highly likely to be recolonized by surrounding vegetation. Road development and drilling activity would take place within the area burned in the 1999 Rochester fire, which currently consists mainly of crested wheatgrass,

bluebunch wheatgrass, and big bluegrass with minor amounts of fourwing saltbush, forage kochia, and sagebrush; therefore, no native plant communities would be eliminated from the Project Area as a result of the Proposed Action. In fact, the reestablishment of native plant communities would be facilitated as a result of the Proposed Action.

4.1.15. Visual Resources

The Proposed Action would result in short-term visual impacts principally affecting the visual elements of line and color. Horizontal and shallow diagonal lines from drill roads would cause moderate, temporary line contrasts with the natural landscape. Disturbance of vegetation would cause moderate, temporary color contrasts. With successful reclamation of exploration roads and revegetation, long-term visual impacts would be minimized. The effects of the Proposed Action on visual resources would be consistent with BLM prescribed Class IV VRM objectives.

4.1.16. Wild Horses and Burros

Impacts to wild horses would consist of temporary habitat loss and disruption of wild horse movement due to Project-related human activity, such as drill rig operation, vehicle travel, and noise. However, the BLM's current objective is to remove the wild horses from the Humboldt HA and wild horses, which are found in small and intermittent bands throughout the HA, are unlikely to concentrate in the Project Area because of the Project-related human activity.

4.1.17. Wildlife

Impacts to wildlife would consist of temporary habitat loss and disturbance from human activity and noise. Approximately 75 acres of existing wildlife habitat would be temporarily impacted by exploration activities over a ten year period, with the actual length of time based on exploration results. The majority of the disturbance would occur within the grasses currently growing from the BLM's effort to seed after the 1999 Rochester fire. This could result in the short-term loss of foraging area for wildlife and nesting habitat for ground nesting birds. Reseeding with a native seed mix (Table 2) would help reestablish native communities, which were destroyed in the 1999 fire. Large acreages of higher quality habitat than what would be disturbed are available in the areas surrounding the Project.

Wildlife sensitive to human activity and noise could be temporarily displaced as a result of the Proposed Action. Construction of roads and drill pads and the operation of drilling equipment could disturb wildlife due to the presence of humans and by creating noise and dust. However, many animals could be expected to become habituated to the regular noise and resume their use of otherwise unaffected habitat. Wildlife foraging activities within the Project Area could continue to be dispersed since a maximum of eight drill rigs would be operating at one time, allowing wildlife to move around and between Project activities. Wildlife habitat fragmentation would be unlikely to occur because the drill program would be dispersed over the 1,200 acre Project Area with a maximum of 75 acres (or six percent) of disturbance over the life of the Project. In addition, the wildlife habitat is relatively homogeneous allowing movement throughout the area. Impacts to wildlife would be lessened by reclaiming access and drill roads, and drill sites as quickly as possible. No long-term impacts to wildlife habitat are likely to occur since reclamation and reestablishment of vegetation would take place between one and three years of Project completion. Therefore, the Proposed Action would have minimal impacts on wildlife species.

Any disturbance to mule deer would likely be limited to temporary auditory and/or visual perturbation of individuals in or near the Project Area. Individual mule deer foraging in the

Project Area during exploration activities would likely leave the immediate area resulting in a temporary spatial redistribution of individuals or habitat-use patterns during the Project; this would not be a long-term effect since there is undisturbed and suitable habitat around the Project Area. The disturbance due to Project-related activities would be short term. No long-term impacts are likely to occur since reclamation and reestablishment of vegetation would take place within several years of Project completion. The quality, quantity, and distribution of suitable mule deer habitat are not expected to be substantially altered by Project implementation. A minor increase in traffic would occur; however, the likelihood of deer-vehicle collisions is considered low because the scrub habitat does not obscure a driver's short or long range line-of-sight.

4.2. No Action Alternative

Under the No Action Alternative, ongoing mineral exploration activities currently permitted in the Project Area, which are similar to those described for the Proposed Action, would continue under the Notice and Permit for Reclamation. Potential impacts identified in the following sections would be proportionally less than those associated with the Proposed Action. The Proposed Action would have a total of 75 acres of disturbance while the permitted disturbance under the No Action Alternative is 25 acres (see Section 2.2).

4.2.1. Air Quality

Under the No Action Alternative, the level of impact to air quality associated with the Proposed Action would not occur; however, ongoing Notice-level and private land mineral exploration activities currently permitted in the Project Area, which are similar to but proportionally less than those associated with the Proposed Action, would continue. Travel on dirt roads, drilling, and excavation activities within the area of the No Action Alternative would create fugitive dust, causing a minor impact to air resources. Fugitive dust would be controlled by minimizing surface disturbance. Speed limits on access roads would be observed, and travel on roads within the Project Area would be conducted at prudent speeds. Impacts would also be controlled by using water trucks for dust suppression, if required. Pursuant to NAC 445B.22037.4(b), MGC would be required to operate under a SAD Permit issued by the NDEP's BAPC before the No Action Alternative disturbs more than 20 acres. The SAD would require MGC to file a Dust Control Plan that itemizes the measures to be taken to control fugitive dust and vehicle emissions. Reclamation of proposed surface disturbance would gradually eliminate long-term impacts to air resources.

4.2.2. Cultural Resources

Under the No Action Alternative, ongoing Notice-level and private land mineral exploration activities currently permitted in the Project Area, which are similar to those described for the Proposed Action, would continue. However, MGC has committed to avoidance of all eligible and unevaluated cultural sites and no impacts are anticipated.

4.2.3. Invasive, Nonnative Species

Under this alternative, the occurrences of invasive, nonnative species of weeds within the Project Area would not be treated by MGC because the Plan would not be approved. BLM and Pershing County activities associated with eradicating weeds would continue.

4.2.4. Migratory Birds

Under the No Action Alternative, migratory birds and their breeding habitat would be avoided. Under the existing Notice and Permit for Reclamation MGC is required to conduct a nest survey prior to surface disturbance during the migratory bird nesting season. If nests are located, or if other evidence of nesting is observed during the survey, a protective buffer would be delineated around the nest and the buffer area would be avoided (Section 6.1). Therefore, the destruction of active nests or disruption of breeding behavior of migratory bird species would not occur as a result of the No Action Alternative.

4.2.5. Native American Religious Concerns

No impacts to Native American concerns are anticipated under the No Action Alternative.

4.2.6. Special Status Species

No impacts to special status species are anticipated under the No Action Alternative, as no species in this category are known to occur in the Project Area. Due to the small and dispersed nature of the surface disturbance resulting from phased exploration activities (i.e. not all proposed sites would be disturbed at once), the No Action Alternative would not result in a substantial net loss of potential habitat and would not contribute to a loss of viability for any one special status species.

4.2.7. Wastes, Hazardous and Solid

Under the No Action Alternative, the level of impact to wastes, hazardous and solid, associated with the Proposed Action would not occur; however, ongoing Notice-level and private land mineral exploration activities currently permitted in the Project Area, which are similar to but proportionally less than those associated with the Proposed Action, would continue. Generation of wastes and the use of hazardous materials as a result of the No Action Alternative could result in the release of wastes or materials. Hazardous and solid wastes within the Project Area would consist of solid wastes, such as refuse, paper, and other inert materials, generated from No Action Alternative activities. In addition, hazardous nontoxic materials would be used in the Project Area that include fuels used to operate equipment associated with No Action Alternative activities and drilling fluids, including abantonite, Alcomer 120L, bentonite, EZ-mud, polyplus, and super plug (Section 2.1.8). The Material Safety Data Sheets for each of the drilling fluids indicate that all are nontoxic.

MGC's Spill Prevention Plan in the existing Permit for Reclamation outlines how wastes and materials would be managed and how a spill would be addressed on private lands. Therefore, the No Action Alternative would have a minimal impact from hazardous and solid wastes on private lands.

4.2.8. Water Quality

Surface Water Resources

Impacts would be minimal due to the use of nontoxic drilling fluids and adherence to NAC 534.4369 and 534.4371. By implementing BMPs for road and drill pad construction, impacts to surface water resources would be minimized. Any residual impacts would only be temporary, lasting until exploration roads and drill pads are successfully reclaimed and revegetated. All

containers of hazardous substances would be labeled and handled in accordance with NDOT and MSHA regulations. Although a spill prevention plan is not required for the existing Notice-level activities, the 43 CFR 3809.420 performance standards require that measures will be taken to isolate, remove or control toxic materials.

Ground Water Resources

Under the existing Notice and Permit for Reclamation all but five drill holes would be plugged prior to the drill rig moving from the drill site in accordance with NRS 534, NAC 534.4369, and NAC 534.4371. Six drill holes would be collared with a reverse circulation drill rig and completed with a core rig. If any drill hole produces artesian flow, the drill hole would be contained pursuant to NRS 534.060 and NAC 534.378 and would be sealed by the method described in Subsection 2 of NAC 534.4371. If the casings are set in a drill hole, either the drill hole must be completed as a well and plugged pursuant to NAC 534.420 or the casings would be completely removed from the drill hole and then plugged according to NAC 534.4369 and NAC 534.4371.

The Project design and environmental protection measures would ensure that the No Action Alternative does not cause a change in water quality that results in an exceedance of the applicable NDEP standards. By monitoring water quality before, during, and following exploration activities, MGC would be certain that no degradation of water quality occurred as a result of No Action Alternative activities.

4.2.9. Wetlands/Riparian Zones

Under the No Action Alternative, no impacts to wetlands/riparian zones are anticipated because, even though not required by 43 CFR 3809, wetlands/riparian zones would be avoided.

4.2.10. Land Use Authorizations and Access

Under the No Action Alternative, the level of impact to land use authorizations and access would be the same as those associated with the Proposed Action. Ongoing county road maintenance, transmission line maintenance, and Notice-level and private land mineral exploration activities currently permitted in the Project Area would continue. The Sierra Pacific transmission line traverses a portion of the Project Area and would be avoided by No Action Alternative activities to ensure that no impacts would occur to the line, poles, or access to the ROW.

4.2.11. Rangeland Management

A potential temporary loss of up to 0.5 AUM could result from the No Action Alternative. This is less than one percent of the initial stocking level for the allotment. Exploration sumps would be constructed with bovine evacuation ramps (BERs) to minimize injury to livestock that inadvertently enter them; therefore, the impact of the No Action Alternative on rangeland resources would be minimal.

4.2.12. Social Values and Economics

The No Action Alternative would have a continuing impact on the local economies as the contract workers would obtain lodging, meals, and supplies in the nearby towns and would most likely be based out of Lovelock or Winnemucca. No additional facilities or housing would need to be constructed and the maximum workforce of approximately 20 persons would not strain the

local housing supply or other services. Impacts from the No Action Alternative on the local economies would be less than those associated with the Proposed Action and would be temporary.

4.2.13. Soils

Surface disturbance associated with the No Action Alternative would impact up to 25 acres of soils. The soil associations in the Project Area vary from slight to severe for erosion hazard by water and are all slight for erosion hazard by wind; therefore, the greatest potential source for erosion in the Project Area is by water (Table 6).

Exploration activities associated with the No Action Alternative would increase the erosion potential for wind and water of disturbed soils until reclamation was successfully completed. The potential impacts to soils would be reduced by measures in the existing Notice and Permit for Reclamation, including the use of waterbars and other BMPs, and the concurrent reclamation of drill pads, sumps, trenches, and drill roads no longer needed for access. Following successful reclamation, which would include regrading, ripping, and revegetation of disturbed areas, soil loss due to the No Action Alternative would be temporary and minimal.

4.2.14. Vegetation

The No Action Alternative would result in surface disturbance of approximately 25 acres of vegetation. The disturbance would be created incrementally and dispersed throughout the Project Area. Reclamation would begin upon completion of exploration activities using a seed mix of native species incorporated into the existing Notice and Permit for Reclamation. In addition, the disturbance would be mostly linear (roads) or patchy (drill pads) in form, and therefore highly likely to be recolonized by surrounding vegetation. Road development and drilling activity would take place within the area burned in the 1999 Rochester fire, which currently consists mainly of crested wheatgrass, bluebunch wheatgrass, and big bluegrass with minor amounts of fourwing saltbush, forage kochia, and sagebrush; therefore, no native plant communities would be eliminated from the Project Area as a result of the No Action Alternative. In fact, the reestablishment of native plant communities would be facilitated as a result of the Proposed Action.

4.2.15. Visual Resources

The No Action Alternative would result in short-term visual impacts principally affecting the visual elements of line and color. Horizontal and shallow diagonal lines from drill roads would cause moderate, temporary line contrasts with the natural landscape. Disturbance of vegetation would cause moderate, temporary color contrasts. With successful reclamation of exploration roads and revegetation, long-term visual impacts would be minimized. The effects of the No Action Alternative on visual resources would be consistent with BLM prescribed Class IV VRM objectives.

4.2.16. Wild Horses and Burros

The BLM's current objective is to remove the wild horses from the Humboldt HA. Wild horses are found in small and intermittent bands throughout the HA and are unlikely to concentrate in the Project Area because of noise and traffic. Therefore, impacts to wild horses are not anticipated from the No Action Alternative.

4.2.17. Wildlife

Impacts to wildlife would consist of temporary habitat loss and disturbance from human activity and noise. Approximately 25 acres of existing wildlife habitat could be temporarily impacted by exploration activities. The majority of the disturbance would occur within the grasses currently growing after the 1999 Rochester fire. This could result in the short-term loss of foraging area for wildlife and nesting habitat for ground nesting birds. Reseeding with a native seed mix would help reestablish native communities that were destroyed in the 1999 fire. Large acreages of higher quality habitat that what would be disturbed are available in the areas surrounding the No Action Alternative activities.

Wildlife sensitive to human activity and noise could be temporarily displaced as a result of the No Action Alternative. Construction of roads and drill pads and the operation of drilling equipment could disturb wildlife due to the presence of humans and by creating noise and dust. However, many animals could be expected to become habituated to the regular noise and resume their use of otherwise unaffected habitat. Wildlife foraging activities within the Project Area could continue to be dispersed since a maximum of four drill rigs would be operating at one time, allowing wildlife to move around and between No Action Alternative activities. Wildlife fragmentation would be unlikely to occur because the drill program would be dispersed over the 1,200 acre Project Area with a maximum of 25 acres (or two percent) of disturbance over the life of the No Action Alternative. The wildlife habitat is relatively homogeneous allowing movement throughout the area. Impacts to wildlife would be lessened by reclaiming access and drill roads, and drill sites as quickly as possible. No long-term impacts to wildlife habitat are likely to occur since reclamation and reestablishment of vegetation would take place between one and three years of the completion of No Action Alternative activities. Therefore, the No Action Alternative would have minimal impacts on wildlife species.

Any disturbance to mule deer would likely be limited to temporary auditory and/or visual perturbation of individuals in or near the Project Area. Individual mule deer foraging in the Project Area during exploration activities would likely leave the immediate area resulting in a temporary spatial redistribution of individuals or habitat-use patterns during the Project; this would not be a long-term effect since there is undisturbed and suitable habitat around the Project Area. The disturbance due to No Action Alternative-related activities would be short term. No long-term impacts are likely to occur since reclamation and reestablishment of vegetation would take place within several years of the completion of No Action Alternative activities. The quality, quantity, and distribution of suitable mule deer habitat are not expected to be substantially altered by implementation of the No Action Alternative. The existing level of traffic would continue and the likelihood of deer-vehicle collisions is considered low because the scrub habitat does not obscure a driver's short or long range line-of-sight.

5. CUMULATIVE IMPACTS

As defined in 40 CFR 1508.7 (CEQ regulations for implementing NEPA) a cumulative impact is an impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions (RFFAs), regardless of which agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. The significance of effects should be determined based on context (i.e., the setting of the Proposed Action) and intensity (40 CFR § 1508.27.(b).(7)). Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts. Intensity refers to the severity of effect. Factors that could be used to define the intensity of effects include the magnitude (relative size or amount of an effect), geographic extent, duration, and frequency of the effects.

Thresholds and criteria (i.e., levels of acceptable change) used to determine the significance of effects vary depending on the type of resource being analyzed, the condition of the resource, and the importance of the resource as an issue (as identified through scoping). Criteria can be either quantitative or qualitative units of measure and should be directly related to relevant cause-and-effect relationships (CEQ 1997).

Resources potentially affected by cumulative effects vary by the type and location. Four different cumulative effects study areas (CESAs) have been developed to address the resources that could be impacted cumulatively based on the extent or geographic distribution of the resource. The four CESAs are the Project Area (1,200 acres), the immediate watershed (approximately 6,400 acres), the Star Peak Grazing Allotment (187,038 acres), and the Buena Vista Valley Hydrographic Basin Number 129 (471,814 acres). Table 8 lists potentially impacted resources, the CESA, and the figure number on which the CESA(s) is shown.

No cumulative impacts would occur to cultural resources, Native American religious concerns, geology and minerals, wetlands and riparian zones, wild horses, wastes, hazardous or solid, land use authorizations and access, or social values and economics; therefore, a cumulative analysis for those resources has not been completed.

Table 8: Cumulative Effects Study Areas

Resource	Cumulative Effects Study Area	Figure
Soils, Invasive, Nonnative Species, Migratory Birds, Special Status Species, Visual Resources, and Wildlife	Project Area	Figure 5
Surface Water Resources, Ground Water Resources, and Vegetation	Immediate Watershed	Figure 6
Rangeland Management	Star Peak Grazing Allotment	Figure 7
Air Quality	Buena Vista Valley Hydrographic Basin (129)	Figure 7

The past actions, present actions, and RFFAs discussed in the following sections have occurred or may occur in numerous geographic locations (e.g. wildland fire) and therefore, could have impacts to resources within the various CESAs. The CESA(s), which may be impacted by each project or activity is identified in Table 9.

Table 9: Areas Potentially Impacted by Past Actions, Present Actions, or Reasonably Foreseeable Future Actions

Project or Activity	Project Area	Immediate Watershed	Star Peak Grazing Allotment	Buena Vista Valley Hydrographic Basin
PAST				
Livestock Grazing	X	X	X	X
Transmission Line	X	X	X	X
County Road Maintenance	X	X	X	X
Recreation	X	X	X	X
Mineral Exploration	X	X	X	X
Placer Mining	X	X	X	X
Notice-level Projects	X	X	X	X
Plan-level Projects				X
Coeur Rochester Mine				X
Wildland Fire	X	X	X	X
PRESENT				
Recreation	X	X	X	X
Livestock Grazing	X	X	X	X
Notice-level Projects	X	X	X	X
Plan-level Projects				X
Transmission Line Maintenance	X	X	X	X
County Road Maintenance	X	X	X	X
Coeur Rochester Mine				X
RFFAs				
Livestock Grazing	X	X	X	X
Recreation	X	X	X	X
Mineral Exploration	X	X	X	X
Transmission Line Maintenance	X	X	X	X
County Road Maintenance	X	X	X	X
Wildland Fire	X	X	X	X
Coeur Rochester Mine				X
Llama Placer Mine		X	X	X

Figure 5: Cumulative Effects Study Area for Soils, Invasive, Nonnative Species, Migratory Birds, Special Status Species, Visual Resources, and Wildlife

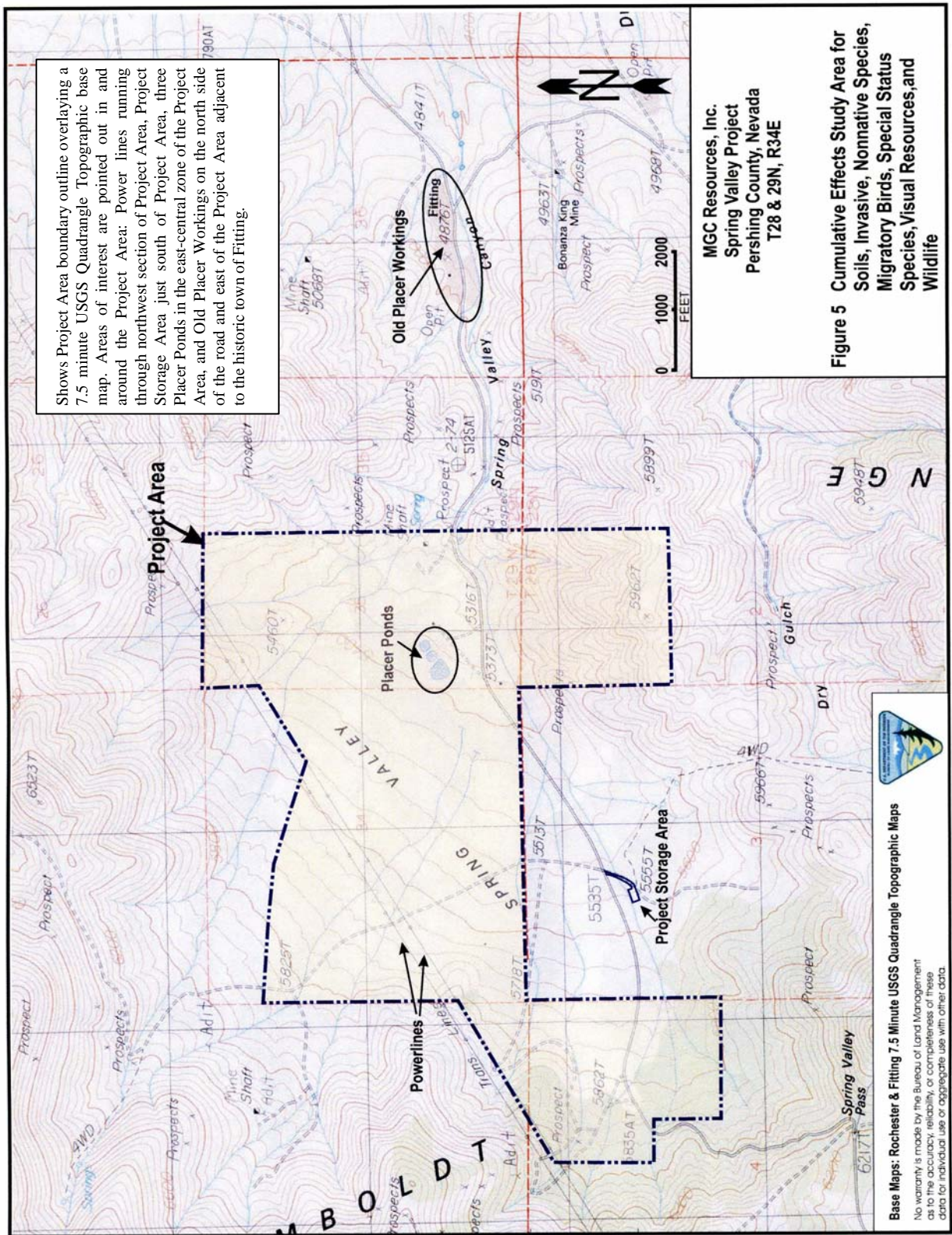


Figure 6: Cumulative Effects Study Area Surface Water Resources, Ground Water Resources, and Vegetation

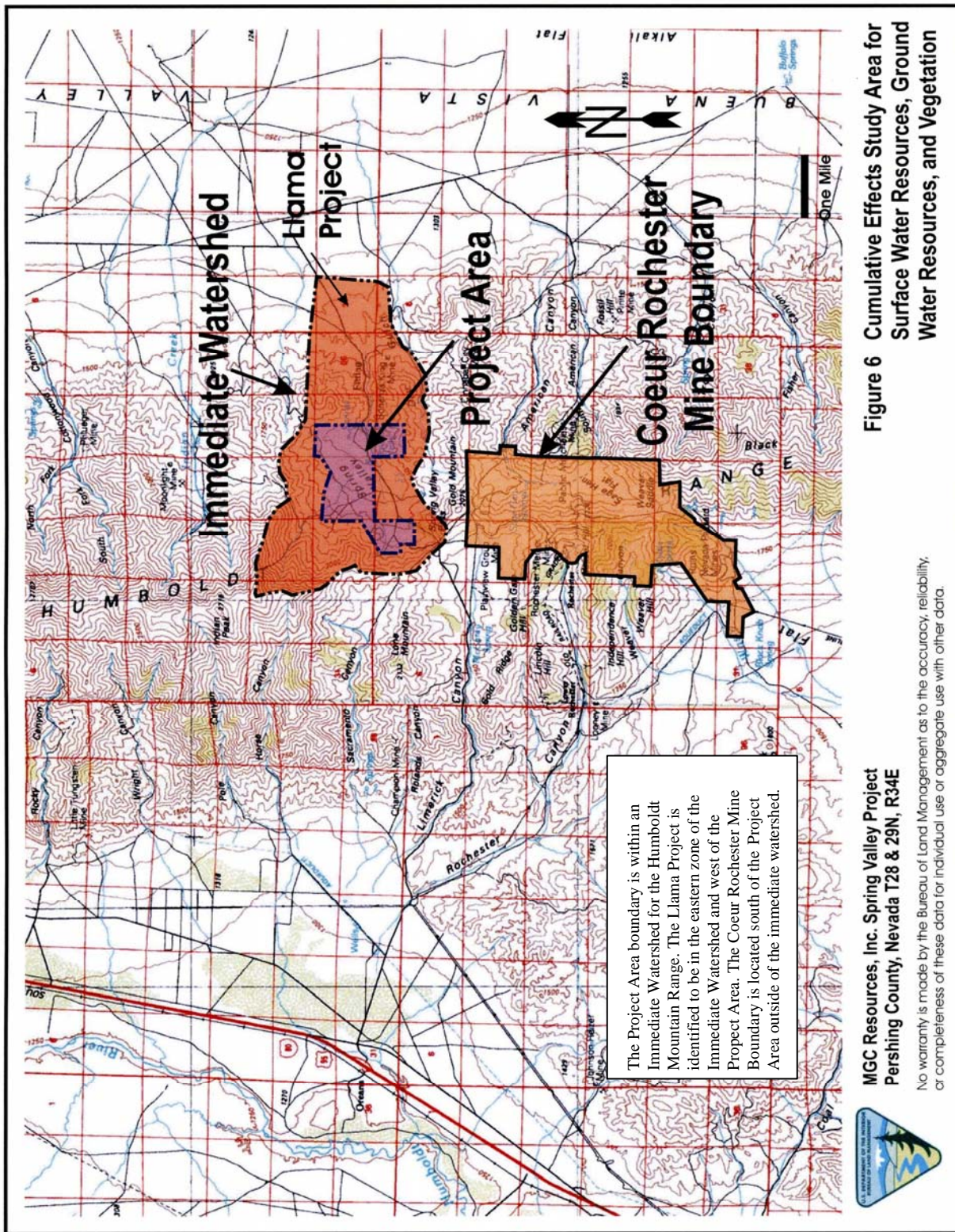
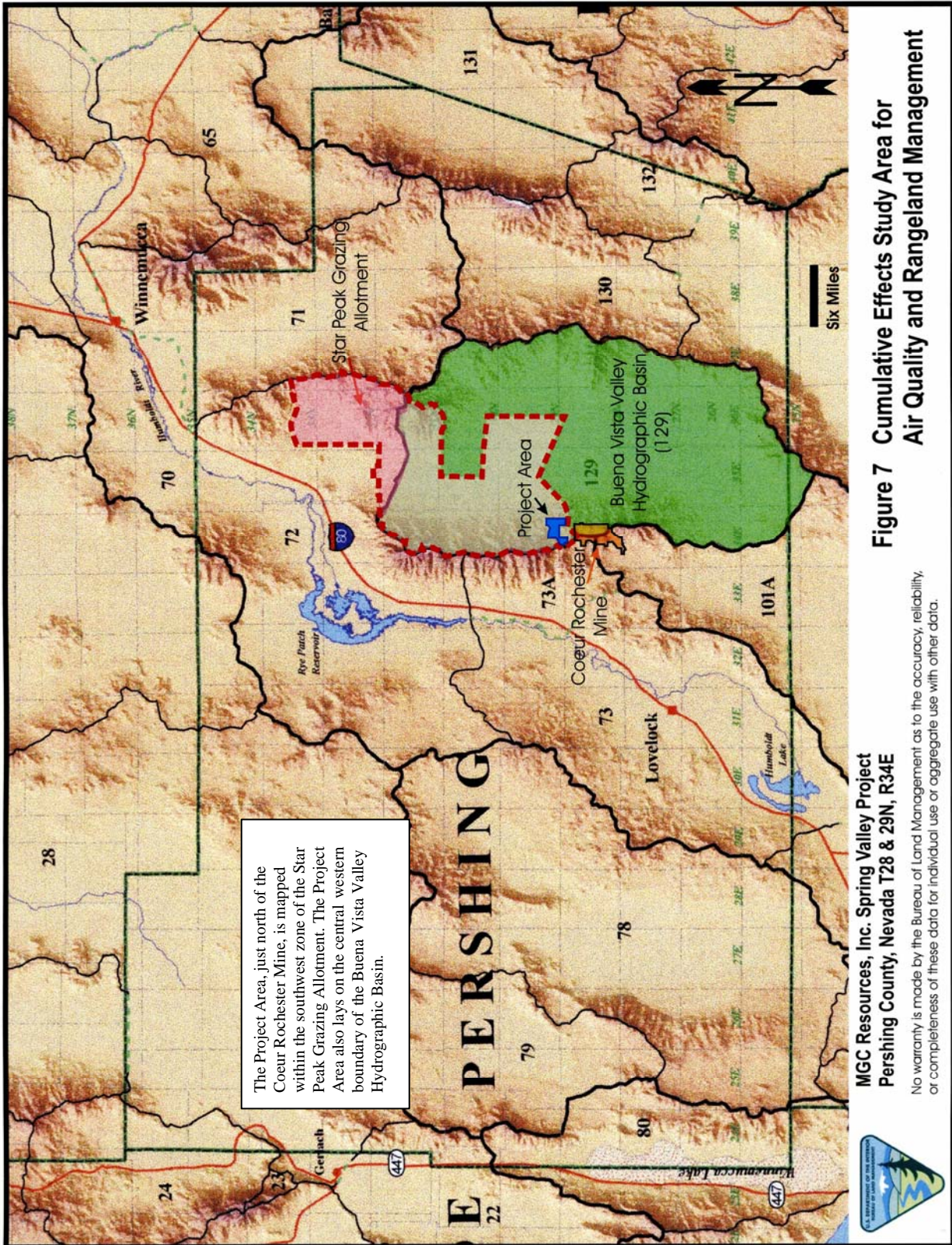


Figure 7: Cumulative Effects Study Area for Air Quality and Range



5.1. Past Actions

Past activities in the four CESAs include the following: livestock grazing; installation and operation of an electric transmission line; recreational use; wildland fires; county road construction and maintenance; Notice-level (minerals activities on BLM administered land with less than five acres of surface disturbance) and plan-level activities (minerals activities on BLM administered land with greater than five acres of surface disturbance); the Coeur Rochester Mine, and historic placer mining. These activities or projects are described in further detail below.

The Star Peak Grazing Allotment (Figure 7) was historically managed for sheep and cattle. The stocking rates over the past 20 years were similar to the current AUMs listed previously in Section 3.12. (Derek Messmer, BLM Rangeland Management Specialist, November 27, 2006).

Sierra Pacific installed an electric transmission line located in a 140 foot ROW, which was granted on July 28, 1980. The voltage of the power line is 345 kilovolts (kv) and maintenance of the poles and lines has been ongoing.

Historic recreational use included rockhounding, hunting, and off highway vehicle (OHV) use.

Placer mining was conducted in the area in the 1870s, 1950s, and 1980s; however, the exact locations and amount of disturbance are not available. Mineral exploration has also been conducted in the area. There have been 175 Notice-level authorizations (under five acres disturbance for each) for a total of approximately 255 acres of potential disturbance. Past disturbance under these authorizations totals approximately 185 acres of which, approximately 146 acres have been reclaimed (LR2000 Database as compiled by BLM). Disturbance associated with Notice-level work includes drill roads, pads, trenches, and maintenance. In addition, four plans of operations were authorized for a total of approximately 1,906 acres of disturbance, which includes the Coeur Rochester Mine plan 1,728 acres (LR2000 Database as compiled by BLM). BLM data shows that 13.9 acres of the disturbance authorized under the various plans of operations have been reclaimed; however, additional reclamation has occurred at the Coeur Rochester Mine and the reconciliation map will be submitted to the BLM for review the week of December 18, 2006 (personal communication, Jerry Hepworth, Coeur Rochester Mine, December 29, 2006).

The Coeur Rochester Mine has been active since 1986. As of 2004, approximately 1,714 acres had been disturbed, of which approximately 40 percent is within the Buena Vista Valley Hydrographic Basin CESA. Approximately 1,561 acres were disturbed on public land and approximately 153 acres were disturbed on private lands. Disturbance associated with the Coeur Rochester Mine includes open pits, waste rock dumps, heap leach pads, operations facilities, conveyor corridors, crushing facilities, and parking lots.

The 1999 Rochester fire burned approximately 12,790 acres within the Buena Vista Valley Hydrographic Basin and included the entire Project Area. Four different vegetation types were burned: black sagebrush (approximately 500 acres); mountain sagebrush (approximately 2,200 acres); Wyoming big sagebrush (approximately 5,000 acres); and shadscale/bud sagebrush (approximately 5,625 acres). According to the potential vegetation types map provided by the BLM, the Project Area was predominantly characterized by Wyoming big sagebrush prior to 1999 (Mike Zielinski, BLM, November 29, 2006). The immediate watershed, which is the CESA for vegetation, appears to have included all four of the previously listed vegetation types. There were a total of 26 recorded fires in the Star Peak Grazing Allotment and the Buena Vista Valley Hydrographic Basin within the Winnemucca District Boundary between 1985 and 2001. A total

of approximately 165,142 acres was burned from these fires within the CESAs and the adjacent lands (Scott Richey, BLM Surface Protection Specialist, November 29, 2006).

5.2. Present Actions

Present actions in the four CESAs (Table 9) include the following: recreation; livestock grazing; Notice- or plan-level exploration and mining; county road maintenance and weed control program, and electric transmission line maintenance.

The Star Peak Grazing Allotment is presently managed for approximately 972 sheep AUMs annually from April 25 through September 30 and 2,609 AUMs annually for cattle from April 1 through December 31. There is an average of approximately 52 acres per AUM for the Star Peak Allotment.

Pershing County maintains a road through the Project Area. An ongoing weed treatment program is currently being conducted by Pershing County on the county-maintained road through the Project Area.

Sierra Pacific electric transmission line maintenance is ongoing, which includes vehicular inspections of the lines and needed repairs to tie downs and transmission lines. Recreational use in the area including rockhounding, hunting, and OHV use is ongoing.

Five Notice-level projects with a total of approximately ten acres of proposed disturbance are underway. Disturbance associated with Notice-level work includes drill roads, pads, trenches, and maintenance.

As stated under the past actions, Coeur Rochester Mine has been active since 1986 and as of 2004, approximately 1,714 acres had been disturbed. Approximately 40 percent of the disturbance is within the Buena Vista Valley Hydrographic Basin CESA. Disturbance associated with the Coeur Rochester Mine includes open pits, waste rock dumps, heap leach pads, operations facilities, conveyor corridors crushing facilities, and parking lots. Reclamation at the Coeur Rochester mine site is ongoing.

5.3. Reasonably Foreseeable Future Actions

The RFFAs include continued livestock grazing, county road maintenance and weed control, recreation, mining at the Coeur Rochester and Llama Placer Mines and wildland fire that would persist, or continue through the ten year period of the Proposed Action.

Livestock grazing, transmission line maintenance, county road maintenance, county weed control program, and recreational activities are expected to continue consistent with the present actions discussion. Wildland fires are also likely to occur within some or all of the CESAs in the next ten years.

Five Notice-level activities are pending with a total of approximately nine acres of proposed disturbance. Disturbance associated with Notice-level work includes drill roads, pads, trenches, and maintenance. In addition, there are three plans of operations that are pending work for a total of approximately 106 acres of proposed disturbance.

A proposed expansion at the Coeur Rochester Mine would disturb an additional 103 acres for an approximate total disturbance of 1,817 acres. The end of mine life is 2007. End of mine life

would be followed by continued reclamation and implementation of closure plans. Monitoring of reclamation and closure success will take place over a five to 30 year period once closure is implemented.

A plan of operations for the Llama Placer Mine has been submitted by Eco Sol to placer mine 144 acres in five acre increments east of the former town site of Fitting in the S of Section 31, T29N, R35E (Figure 6). The placer pit would be excavated to 30- to 60-foot depths and would be expected to use 6,000 gallons of make-up water (process water) per day when the operation is operating at full capacity. Mining operation would be above the water table. The water would be taken from either a well or Spring Valley Creek, which flows through the Llama Placer mine project area. The excavation of the pits is planned to occur in two acre increments with no more than four acres of unreclaimed pit disturbance and no more than seven acres of total disturbance at any given time during the project. A portable office and toilet are expected to be used. This project is located on the east margin of the immediate watershed CESA. It is also located within the Buena Vista Valley Hydrographic Basin and the Star Peak Grazing Allotment.

5.4. Proposed Action Impact Analysis

CEQ does not give clear guidance in describing the intensity of impacts for a given resource; however, “low adverse effect,” “moderate adverse effect,” “high adverse effect,” “beneficial effect,” and “no effect” are used in an example shown on page A-8 of Considering Cumulative Effects Under the National Environmental Policy Act (CEQ 1997). For the purpose of cumulative assessments in this EA, high impacts would be those impacts that were considered significant; medium impacts would be those that are discernable to moderate and would occur over an extended time frame; and low impacts would be short term in length and de minimus to minor.

5.4.1 Air Quality

Past Actions: Impacts to air quality from past actions have resulted from background emission sources including windblown dust and dust from public recreational and mine employee traffic on unpaved roads, county road maintenance and traffic on the county road; fugitive emissions from wildland fire; and emission sources and fugitive dust from the Rochester Mine and Notice-or plan-level activities. The impacts due to emissions from background sources and mineral exploration are considered to have been low. Since 1977, emissions from mining have been regulated by permits issued by the NDEP/BAPC, resulting in moderate impacts to air quality from past actions in the CESA.

Present Actions: Impacts to air quality from present actions include the past background emission sources as well as emissions from ongoing recreation, mineral exploration, mining, mine reclamation, traffic on unpaved roads, county road construction and maintenance, and traffic on the county road. Mineral exploration projects that disturb up to 20 acres are considered to have a minimal impact on air quality and are not regulated by the NDEP/BAPC as long as BMPs are utilized to minimize impacts to air quality. Mining and reclamation of the Rochester Mine is currently regulated by an air quality permit from the NDEP/BAPC. Impacts from present actions in the CESA are considered to be moderate due to the extent of current mining operations.

Reasonably Foreseeable Future Actions: Impacts to air quality from RFFAs could result from the generation of dust from public recreational traffic on unpaved roads, mineral exploration, and the proposed Llama Placer Mine and fugitive emissions from wildland fire. Dust from public traffic

on unpaved roads would likely create a low impact to air quality. Impacts from mineral exploration and mining would be regulated by the NDEP/BAPC and BLM, and impacts to air quality from RFFAs in the CESA would be moderate.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on air resources from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs would be fugitive, point source, and mobile combustion emissions, which would remain moderate. The air quality regulations implemented by NDEP/BAPC and BLM help to maintain the moderate condition.

5.4.2 Invasive, Nonnative Species

Past Actions: Past actions, particularly recreational OHV use, mining, exploration, wildland fire, grazing, construction and maintenance of the electric transmission line, and county road construction and maintenance, have resulted in occurrences of knapweed, hoary cress, saltcedar, and Canada thistle within the Project Area. The presence of invasive, nonnative species in the CESA due to all of the past actions is localized and considered to be a moderate impact.

Present Actions: Impacts from present actions would result from grazing, Notice-level activities, and maintenance of the transmission line and county road. Impacts would result in the introduction or spread of invasive, nonnative species. Impacts from invasive, nonnative species from present actions in the CESA are expected to be low due to an aggressive BLM program to control invasive, nonnative species and limit their spread. In addition, the Coeur Rochester mine has an active noxious weed plan that treats weeds in the mine area and along a portion of the access route to Lovelock and Pershing County has a weed control program on the county-maintained road that traverses the Project Area. Although the Coeur Rochester Mine and weed treatment area are outside of the CESA, weed control efforts conducted in the vicinity of the CESA would help to control the spread of invasive, nonnative species within the Project Area and CESA.

Reasonably Foreseeable Future Actions: Impacts from RFFAs could result from grazing, recreation, wildland fire, and maintenance of the transmission line and county road. Impacts would result in the introduction or spread of invasive, nonnative species. These impacts would also be minimized due to control and treatment measures that would be implemented as required by the BLM.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. Impacts would result in the introduction or spread of invasive, nonnative species. The cumulative impacts of invasive, nonnative species from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is an approximate one percent increase in disturbed area (excluding wildfire) within the CESA. The impact would remain at a moderate level. In addition, the revegetation efforts following the Rochester Fire, the reclamation under the Proposed Action, and the number of weed control activities that would occur within the CESA would result in a reduction of invasive, nonnative species.

5.4.3 Migratory Birds

Past Actions: Impacts to migratory birds have resulted from OHV use and overland travel for wildland fire suppression. Prior to adoption of the MBTA, impacts to migratory birds could also have resulted from surface disturbance during mineral exploration and mining, livestock management, construction of the electric transmission line, and county road construction and

maintenance. Reclamation of areas disturbed from these past actions, seeding of burned areas, and natural revegetation are considered to result in overall low impacts to migratory birds.

Present Actions: Impacts to migratory birds could result from maintenance of the electric transmission line and the county road as well as recreation and livestock grazing. In addition, impacts could result from Notice-level activities during construction of access roads and drill pads and the crushing of vegetation by vehicles traveling crosscountry or on two track roads. However, as required by the MBTA, these actions would include implementation of mitigation measures (Section 6.1) to avoid disturbance of migratory birds. Therefore, impacts to nests or breeding behavior of migratory bird species are expected to be low.

Reasonably Foreseeable Future Actions: Impacts to migratory birds from RFFAs are considered to be similar to those described for present actions and would be avoided through implementation of mitigation measures that ensure compliance with the MBTA. Therefore, impacts to nests or breeding behavior of migratory bird species are expected to be low.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on migratory birds from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is an approximate one percent increase in disturbed area (excluding wildfire) within the CESA. The impact would remain at a low level because the present actions and RFFAs would be required to implement mitigation measures that ensure compliance with the MBTA. In addition, seeding of burned areas and natural revegetation are considered to increase habitat for migratory birds.

5.4.4 Surface Water Resources

Past Actions: Prior to the initiation of the Clean Water Act, few if any measures to control or minimize impacts to surface water resources were required. Most surface water quality impacts would have resulted from sediment generated during placer mining and mineral exploration. Other activities, including construction of the electric transmission line; county road construction and maintenance; recreation activities; wildland fire; and livestock grazing could also have contributed to surface water resource impacts. More recent Notice-level activities would have implemented BMPs and sediment control measures to reduce impacts to surface waters. Past impacts from these actions would be considered low to moderate.

Present Actions: Impacts to surface water resources from present actions are similar to the impacts from past actions and would include recreation, livestock grazing, Notice-level activities, county road maintenance, and transmission line maintenance. These impacts would be localized and minimized due to implementation of environmental protection measures, which include sediment control measures and reclamation. Impacts from present actions would, therefore, be considered low.

Reasonably Foreseeable Future Actions: Surface water quality impacts from RFFAs within the CESA could include sedimentation from Notice- and plan-level activities, the Llama Placer mine, recreation, livestock grazing, county road maintenance, and transmission line maintenance. The Notice- and plan-related impacts would be subject to the NDEP water quality permits and compliance, development of mitigation measures, and implementation of environmental protection measures. It is expected that impacts from RFFAs would be localized and would be low, pending implementation of permit requirements.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. MGC has initiated a water sampling program in order to assess the water quality prior to additional work. The cumulative impact on surface water resources from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is an approximate 0.1 percent increase in disturbed area (excluding wildfire) within the CESA. The impact would remain low because of the limited number of activities within the CESA. Surface water in the immediate watershed CESA consists of perennial and intermittent streams or creeks including a portion of Spring Valley Canyon Creek and numerous springs.

5.4.5 Ground Water Resources

Past Actions: Prior to the initiation of the Clean Water Act, few if any measures to control or minimize impacts to ground water resources were required. Most ground water quality impacts consisted of not properly abandoning wells during placer mining leading to the creation of artificial wetlands and the ground water mixing with surface water. Past impacts from these actions would be considered low to moderate.

Present Actions: Impacts to ground water resources from present actions are similar to the impacts from past actions. However, these impacts would be localized and minimized pursuant to NRS 534, NAC 534.4369, NAC 534.4371, NRS 534.060, and NAC 534.378. Impacts from present actions would be considered low.

Reasonably Foreseeable Future Actions: Ground water quality and water consumption impacts from RFFAs could include contamination from mineral exploration and the mining operation at the Llama Placer mine. These exploration and mining related impacts would be subject to the NDEP water quality and Nevada Division of Water Resources (NDWR) water quantity permits and compliance, development of mitigation measures, implementation of environmental protection measures, and adherence to State of Nevada laws and statutes. It is expected that impacts from RFFAs would be low, pending implementation of permit requirements.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on ground water resources from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is the consumption of water resources, and the potential water quality impacts through spills, which is considered to be low because of the implementation of the Spill Contingency Plan, BMPs, and adherence to State of Nevada laws and statutes. In addition, MGC has initiated a ground water sampling program in order to assess the water quality prior to additional work.

5.4.6 Rangeland Management

Past Actions: Recreation, wildland fires, mineral exploration and mining, county road construction and maintenance, and the construction and maintenance of the electric transmission line would have had impacts to rangeland resources. Reclamation of areas disturbed from these past actions, seeding of burned areas, and natural revegetation are considered to result in overall low impacts to rangeland resources.

Present Actions: Impacts to rangeland resources from present activities are considered to be the same as past actions with the exception of the removal of AUMs associated with Notice- and plan-level activities. Impacts from the ongoing activities would be considered low. Approved Notice- and plan-level authorizations could disturb up to approximately 559 acres (284 acres under plans, 275 acres under Notices), which includes disturbance in the hydrographic basin

outside of the CESA for rangeland resources. The Star Peak Allotment consists of 187,038 acres; therefore, present Notice- and plan-level actions equate to only 0.3 percent of the CESA and would impact at most 11 AUMs. In addition, reclamation, including revegetation, of disturbed lands following mineral exploration would result in on a temporary loss of AUMs; therefore impacts from Notice- and plan-level activities are anticipated to result in a low impact to rangeland resources in the CESA.

Reasonably Foreseeable Future Actions: Impacts to rangeland resources within the CESA could result from recreation, wildland fires, mineral exploration and mining (specifically the Llama Place Mine), county road maintenance, and the construction and maintenance of the electric transmission line. The Llama Placer Mine would result in an additional 144 acres of disturbance and could impact up to three additional AUMs. However, reclamation following the completion of exploration, mining, and processing activities would mitigate impacts to BLM-administered public lands and revegetation measures would be implemented for areas burned by wildland fire. It is expected that impacts from RFFAs would be low to moderate, pending implementation of permit requirements and reclamation and revegetation measures.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on rangeland resources from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is considered to be low because the additional disturbance of 75 acres would result in the additional reduction of at most two AUMs, which would be mitigated through reclamation measures outlined in the Proposed Action.

5.4.7 Soils

Past Actions: Impacts to soils could have occurred during past actions as a result of OHV use, livestock grazing, surface disturbance and salvage during mineral exploration and mining, wildland fire, construction of the electric transmission line, and county road construction and maintenance. Impacts from recreation were considered low due to the small amount of surface area disturbed in the 1,200 acre CESA. Impacts from mineral exploration were also considered low because of the small amount of surface disturbance. In addition, MGC exploration included salvaging the topsoil and replacing it during reclamation as well as seeding disturbed areas. Impacts from historic mining were considered moderate because of the extent of surface disturbance. Overall impacts to soils from past actions are considered to have been low to moderate.

Present Actions: Impacts to soils could result from maintenance of the electric transmission line and the county road as well as recreation and livestock grazing. In addition, impacts could result from Notice-level activities during construction of access roads and drill pads and the disruption of soils by vehicles traveling crosscountry or on two track roads. However, the impacts on soils in the CESA due to present actions are considered to be low based on the use of approved methods of soil handling, erosion prevention techniques, concurrent reclamation when possible, and seeding at appropriate times of year for successful revegetation. Successful revegetation of Notice- and plan-level activities is mandated before the release of a bond; therefore, impacts associated with present actions is considered low.

Reasonably Foreseeable Future Actions: Impacts to soils from RFFAs are considered to be similar to those described for present actions with the addition of wildland fire. However, the impacts on soils in the CESA due to RFFAs are considered to be low based on the use of approved methods of soil handling, erosion prevention techniques, and seeding.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on soils from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is considered to be low because of the limited disturbance from the Proposed Action (75 acres, or six percent of the CESA) and based on the use of approved methods of soil handling, erosion prevention techniques, and seeding.

5.4.8 Special Status Species

Past Actions: Impacts to special status species could have resulted from OHV use, wildland fire and fire suppression activities. Prior to adoption of the MBTA, impacts to special status species would also have resulted from surface disturbance during mineral exploration and mining, livestock management, construction and maintenance of the county road, and construction of the electric transmission line. Reclamation of areas disturbed from these past actions, seeding of burned areas, and natural revegetation are considered to result in overall low impacts to special status species.

Present Actions: Impacts to special status species could result from maintenance of the electric transmission line and the county road as well as recreation and livestock grazing. In addition, impacts could result from Notice-level activities during construction of access roads and drill pads. However, as required by the MBTA, these actions should include implementation of mitigation measures to avoid disturbance to special status species or their habitat in the CESA. Therefore, the destruction of special status species or their habitat should not occur as a result of the present actions and impacts to special status species would be low.

Reasonably Foreseeable Future Actions: Impacts to special status species (i.e., migratory birds) from RFFAs are considered to be similar to those described for present actions with the addition of potential wildland fires. Special status species would be avoided through implementation of mitigation measures that ensure compliance with the MBTA.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on special status species from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is considered to be low because the present actions and RFFAs should implement mitigation measures that ensure compliance with the MBTA. In addition, seeding of burned areas, reclamation, and natural revegetation are considered to alleviate impacts to special status species and their habitat.

5.4.9 Vegetation

Past Actions: Impacts to vegetation within the immediate watershed CESA could have occurred during past actions as a result of recreation and OHV use, surface disturbance during mineral exploration and mining, wildland fire, livestock management, construction and maintenance of the county road, and construction of the electric transmission line. Impacts from recreation were considered low due to the small amount of surface disturbance in the 5,400 acre CESA. Reclamation of areas disturbed from exploration and mining, seeding of burned areas, and natural revegetation were considered to result in overall low to moderate impacts to vegetation.

Present Actions: Impacts to vegetation could result from maintenance of the electric transmission line and the county road as well as recreation and livestock grazing. In addition, impacts could result from Notice-level activities during construction of access roads and drill pads and the disturbance of vegetation by vehicles traveling crosscountry or on two track roads. Reclamation and revegetation following mineral exploration is anticipated to result in a low to moderate

impact to vegetation in the CESA. In addition, vegetation impacts from recreation and other activities would be offset by environmental protection measures, the use of BMPs, and reseeding with a BLM-approved seed mix and would result in a low impact to vegetation in the CESA.

Reasonably Foreseeable Future Actions: Impacts to vegetation from RFFAs are considered to be similar to those described for present actions with the addition of potential future wildland fires and the Llama Placer mine. Impacts on vegetation are considered to be low based on the use of environmental protection measures, and the reclamation and reseeding of disturbed areas.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on vegetation from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is an approximate 0.5 percent increase in disturbed area (excluding wildfire) within the CESA. The impact would remain low because of the limited disturbance from the Proposed Action and the other activities within the CESA, as well as the implementation of reclamation measures and reseeding with a BLM-approved seed mix.

5.4.10 Visual Resources

Past Actions: Impacts to visual resources within the Project Area CESA could have occurred as a result of past actions including recreation and OHV use, livestock grazing, mineral exploration, mining, wildland fire, construction and maintenance of the county road, and construction of the electric transmission line. These activities could have altered the characteristics of line, form, color, and texture within the CESA. However, as discussed in Section 2.1.1, reclamation of areas disturbed from these past actions and natural revegetation have shown to result in low impacts to visual resources.

Present Actions: Impacts to visual resources from present activities, would include changes to line, form, color, and texture primarily from exploration activities. However, these impacts would be minimized due to implementation of environmental protection measures, which include reclamation of the drill roads and pads concurrently or at the completion of activities. Impacts to visual resources in the CESA would be considered low.

Reasonably Foreseeable Future Actions: Impacts could occur to visual resources from RFFAs similar to those under present actions with the addition of wildland fire and could result in changes to line, form, color, and texture similar to those that occurred in past actions. Due to the implementation of reclamation measures including reseeding overall impacts to visual resources in the CESA as a result of RFFAs are anticipated to be low.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on visual resources from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is an approximate one percent increase in disturbed area (excluding wildfire) within the CESA. The impact would remain low because of the limited disturbance from the proposed action and other activities within the CESA, as well as implementation of reclamation measures including seeding of drill pads and roads.

5.4.11 Wildlife

Past Actions: Impacts to wildlife have resulted from OHV use, wildland fire, surface disturbance during mineral exploration and mining, livestock management, construction and maintenance of the county road, and construction of the electric transmission line. Reclamation of areas

disturbed from these past actions, seeding of burned areas, and natural revegetation are considered to result in overall low impacts to wildlife.

Present Actions: Impacts to wildlife, such as the loss of habitat or noise disturbance, resulted from maintenance of the electric transmission line and the county road as well as recreation and livestock grazing. In addition, impacts could result from Notice-level activities during construction of access roads and drill pads. However, these actions should include implementation of mitigation measures to minimize disturbance to wildlife or their habitat in the CESA. Therefore, impacts to wildlife are considered to be low.

Reasonably Foreseeable Future Actions: Impacts to wildlife from RFFAs are considered to be similar to those described for present actions with the addition of potential wildland fires. Disturbance of wildlife and their habitat would be minimized through implementation of mitigation measures. Impacts to wildlife are considered to be low.

Cumulative Impact: The Proposed Action is analyzed in Chapter 4. The cumulative impact on wildlife from the incremental impact of the Proposed Action when added to the past actions, present actions, and RFFAs is an approximate one percent increase in disturbed area (excluding wildfire) within the CESA. The impact would remain low because the present actions and RFFAs should implement mitigation measures to minimize disturbance to wildlife or their habitat. In addition, seeding of burned areas, reclamation, and natural revegetation are considered to alleviate impacts to wildlife and their habitat.

5.5. No Action Impact Analysis

Potential impacts to resources from the No Action Alternative were analyzed in Chapter 4 of this EA. Based on the Chapter 4 impacts analysis, there would be no cumulative impacts from the incremental impact of the No Action Alternative when added to the past action, present action, and RFFAs.

6. MITIGATION MEASURES AND MONITORING

6.1 Migratory Birds

The following mitigation measure could be implemented to avoid the destruction of active nests or disruption of breeding behavior of migratory bird species and thus avoid impacts to migratory birds associated with the Proposed Action. In order to avoid potential impacts to breeding migratory birds, a nest survey should be conducted within potential breeding habitat prior to any surface disturbance during the avian breeding season (April 15 to July 15). If nests are located, or if other evidence of nesting (i.e., mated pairs, territorial defense, carrying nest material, transporting food) is observed, a protective buffer (the size depending on the habitat requirements of the species) should be delineated and the buffer area avoided to prevent destruction or disturbance to nests until they are no longer active. The site characteristics used to determine the size of the buffer are: a) topographic screening; b) distance from disturbance to nest; c) the size and quality of foraging habitat surrounding the nest; d) sensitivity of the species to nest disturbances; and e) the protection status of the species.

6.2 Invasive, Nonnative Species

The proposed action includes overland travel to most of the exploration activities anywhere in the project area. Since most of the terrain is relatively flat and covered with grasses, the travel routes are not easily distinguished. Therefore, it would be difficult to determine if noxious weeds located with the plan boundary are due to exploration activities.

The following mitigation measure would be implemented in order to control or even eliminate the spread of noxious weeds in the project area. Bi-annually, starting in 2008, until the final release of revegetation, the operator would complete a noxious weed survey within the entire plan of operations boundary to ensure that all overland travel routes are monitored. The operator would then have a licensed contractor treat the noxious weeds as appropriate and as approved by the BLM. A report of the findings and treatment method(s) would be sent to the BLM within 60 days after treatment. A pesticide use proposal would need to be submitted to the BLM for approval prior to noxious weed treatment.

6.3 Monitoring

The BLM would be responsible for monitoring to ensure compliance with the approved Plan and regulations. Monitoring activities would be conducted as prescribed by the regulations at 43 CFR 3809, applicable policies for the surface management of mineral operations, and the MOU for Mining and Mineral Related Activities within the State of Nevada.

7. CONSULTATION AND COORDINATION

This EA was prepared at the direction of the BLM, Winnemucca, Nevada, by Enviroscientists, Inc., under a contract with MGC. The following is a list of individuals responsible for preparation of the EA.

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7.2 Persons, Groups, and Agencies Consulted

The following individuals, organizations, and agency representatives were contacted during the preparation of this EA.

Pershing County Road Department
Nevada Department of Wildlife

Notification of the MGC Spring Valley Exploration Project was sent to the following:

Associated Press of Reno

Battle Mountain Bugle

KUNR - Reno

Lovelock Review-Miner

KWNA - Radio

The local Hispanic newspaper (Hispana)

Mail Box News

The Humboldt Sun

This N That (a newsletter issued by U.S. Gypsum Co. in Gerlach area)

The Gerlach General Improvement Committee/Community Center

Valley New Lahontan (Fallon area)

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APPENDIX A

NOXIOUS WEED PREVENTION AND CONTROL PLAN AND NOXIOUS WEED SURVEY

APPENDIX B

PROJECT AREA WATER QUALITY INFORMATION

APPENDIX C

NEVADA NATURAL HERITAGE PROGRAM LETTER

APPENDIX D

VISUAL CONTRAST RATING WORKSHEET